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A book of practical points gathered from
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SEAL OF THE LELAND STANFORD JUNIOR UNIVERSITY
SEMPER VIRENS
1885
In Memory of Dr. W.V. Grimes

every available means to palliate and relieve the symptoms of the disease that is incurable.

In the development of the modern science of medicine, the fact too often lost sight of is that the most valuable agents in the materia medica are the outcome of purely empirical observations. Long before the birth of experimental pharmacology, physicians had learned the action and uses of drugs by actual experience at the bedside. The employment of such indispensable remedies as morphine, opium, quinine—to name only a few—was based upon clinical investigations which long antedated the laboratory researches and animal experimentation of the present era. To borrow a homely expression, which, however, is pregnant with truth, the practitioner of medicine has always believed that the proof of the pudding is in the eating, or in other words, that the accumulated clinical experience of a large nu al men is worth any amount of theoreti aboratory test tubes experiments.

TABLE I.

Weight and Height Ratio.

Lbs.	Ht.	Lbs.	Ht.
115	5 ft. 0 in.	155	5 ft. 8 in.
120	5 " 1 "	160	5 " 9 "
125	5 " 2 "	165	5 " 10 "
130	5 " 3 "	170	5 " 11 "
135	5 " 4 "	175	6 " 0 "
140	5 " 5 "	180	6 " 1 "
145	5 " 6 "	185	6 " 2 "
150	5 " 7 "	190	6 " 3 "

TABLE II.

Respiration, Pulse and Temperature Ratio.

Respirations	Pulsations	Temperature
18	80	99° F.
19 (plus)	88	100
21 "	96	101
23	104	102
25 (minus)	112	103
27	120	104
28 "	128	105
30	136	106

	NAME	PERIOD OF INCUBATIO		PTION	CONTAGIOUS PERIOD	P QU
1	Scarlet Fever	6 days	ever	5 to 10 days	6 weeks	14 days
2	Small-pox	10 to 14 days	3 ever	14 to 21 days	6 weeks	45 days
3	Measles	10 days	4th day ver	5 to 10 days	20 days	18 days
4	Roethein	10 days	2nd day of fever	3 to 5 days	10 days	15 days
5	Mumps	14 to 25 days			8 weeks	25 days
6	Whooping Cough	10 days		6 weeks	6 weeks	42 days
7	Chicken-pox	4 days	2nd day of fever	7 days	3 weeks	21 days
8	Diphtheria	5 days			6 weeks	12 days after
9	Typhus Fever	12 days	17th day of fever	21 days	28 weeks	42 days
10	Typhoid Fever	14 days	4th day of fever	20 days	6 weeks	After eruption is gone
11	Erysipelas	7 days	2nd day of fever	Indefinite	To end of exanthem.	

also opposite "Preface."

A Book of Practical Points Gathered from Various Sources

Gleaned from Many Minds

With Chapters on

Hookworm and Pellagra

...BY...
J. H. McCURRY, M. D.

It is sufficient to denominate the way *practicable;* for we esteem that to be such which in the trial oftener succeeds than misses.

—*Dryden.*

DEDICATED TO THE GOOD, HONEST,
CONSCIENTIOUS, PROGRESSIVE
MEN IN THE PROFESSION

"It is the accumulation of our experiences that makes our empirical knowledge, at last, scientific fact."—*Mundy.*

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GRUBBS, ARKANSAS

TABLE IV.

OBSTETRICAL TABLE

January	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
OCTOBER	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	NOV.
February	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28				
NOVEMBER	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5				DEC.
March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
DECEMBER	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	JAN.
April	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
JANUARY	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4		FEB.
May	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
FEBRUARY	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	7	MAR.
June	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
MARCH	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		APRIL
July	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
APRIL	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	MAY
August	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
MAY	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	JUNE
September	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
JUNE	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7		JULY
October	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
JULY	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	AUG.
November	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
AUGUST	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		SEPT.
December	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SEPTEMBER	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	OCT.

As the normal term of pregnancy is about 10 lunar months or about 280 days, this table has been devised to show at a glance the beginning and end of every 280-day period throughout the year. Find the date of the last menstruation on the upper line of the horizontal row and the figure below with the indicated month, will be the 280th day.

POISONS AND ANTIDOTES

POISON	ANTIDOTE	TREATMENT
Carbolic Acid	Alcohol, Salt, Soap	Eggs (white), Atropine, Morphine
Aconite	Tannic Acid, Animal Charcoal	Atropine, Morphine, Amyl Nitrite, Ammonia
Belladonna	Tannin, Mg. Bicarb. Charcoal āā ʒss	Morphine, Aconite, Pilocarpine
Cocaine	Tannin, Potassii Permang.	Chloral, Chloroform, Morphine
Digitalis	Tannin	Aconite, Alcohol
Chloral	Liq. Potassii Hydroxidi.	Strychnia, Alcohol, Atropine
Mushrooms	Atropine	Alcohol, Emetic or Purgative
Chloroform	Sodii Carb. in water	Atropine, Strychnia, Adrenalin
Strychnine	Potassii Permang. Iodine	Chloral, Veratrum Viridi
Night Shade	Tannic Acid	Morphine, Brandy, Coffee
Opium	Potassii Permang. Tannin	Cocaine, Atropine, Caffein
Phosphorus	Potassii Permang. Lime Water	Opium
Arsenic	Dialized Iron, Magnesia, Sugar	Wash out stomach with Albumin Water
Lye	Fats or Fixed Oils, Lemon Juice	Morphine, Atropine, Milk, White of Egg

COMPARATIVE VALUES OF APOTHECARIES AND METRIC WEIGHTS (SOLID)

Liquid	Drops in fʒ†	Grains	Grams
Alcohol	146	$\frac{1}{100}$	0.00065
Ether	176	$\frac{1}{60}$	0.00103
Chloroform	250	$\frac{1}{50}$	0.00130
Phenol	111	$\frac{1}{40}$	0.00162
Ac. Hcl.	70	$\frac{1}{32}$	0.00202
Ac. Nitric	102	$\frac{1}{30}$	0.00216
Ac. Nitro-Hcl.	76	$\frac{1}{20}$	0.00324
Ac. Sulph. dil.	60	$\frac{1}{12}$	0.00540
Ac. Phos. dil.	59	$\frac{1}{10}$	0.00648
Fl. Ext. Digit.	134	$\frac{1}{8}$	0.00810
Fl. Ex. Bella. r.	156	$\frac{1}{5}$	0.01296
Fl. Ext. Ergot	133	$\frac{1}{4}$	0.01620
L. Ac. Arsen.	57	$\frac{1}{2}$	0.03240
Liq. Pot. Hy.	62	1	0.065
Liq. Io. Com.	63	5	0.324
Syr. Ferri Iod.	65	10	0.650
Tr. Aconite	146	15.432	1.
Tr. Bellad. f.	137	20	1.300
Tr. Digitalis	128	30	1.95
Tr. Opii	130	40	2.60
Tr. Ferri Chl.	150	60	3.888
Tr. Opii Cam.	130	1 oz.	31.10349
Tr. Iodine	148	4 oz.	124.40
Sp. Aeth. Nit.	148	6 oz.	186.60
Ol. Ricini	77	12 oz.	373.23
Ol. Tiglii	104	8 oz.	248.80
Glycerine	67	16 oz.	497.60

COMPARATIVE VALUES OF APOTHECARIES AND METRIC MEASURES (FLUID)

MINIMS	Liquids lighter than water	Liquids same sp. grav. water	Liquids heavier than water
	Cubic Centimeters		
1	0.055	0.06	0.08
2	0.10	0.12	0.15
3	0.16	0.18	0.24
4	0.22	0.24	0.32
5	0.28	0.30	0.40
10	0.55	0.60	0.80
15	0.80	0.90	1.20
20	1.12	1.25	1.60
25	1.40	1.55	2.00
30	1.70	1.90	2.50
40	2.25	2.50	3.30
50	2.80	3.12	4.15
60 fʒi	3.40	3.75	5.00
90 fʒiss	5.10	5.60	7.00
120 fʒii	6.75	7.50	10.50
240 fʒiv	13.50	15.00	20.00
360 fʒvi	20.25	22.50	30.00
480 f℥i	27.00	30.00	40.00
1000	56.00	62.50	83.00

INFECTIOUS DISEASES

	Incubation Period	Date of definite illness when the eruption		Quarantine required after *latest* exposure to infection	Infection ceases
		Appears	Begins to fade		
Chicken Pox	10 to 16 days	1st day and 3 following days	About 4th	20 days	When every scab has fallen off.
Diphtheria	2 to 10 days	....	....	12 days	In 4 weeks, if no discharges, or albumin, and if bacteriological examination of nose and throat be negative.
German Measles (Roetheln)	7 to 18 days or even longer	2nd to 4th	4th to 7th	20 days	In not less than 10 days from appearance of rash.
Measles	10 to 14 days	4th day. Highly infectious for 2 days before rash appears	5th to 7th	16 days	In not less than 2 weeks from appearance of rash.
Mumps	10 to 22 days	....	....	24 days	In not less than 3 weeks, and only when 1 week has elapsed since subsidence of all swelling.
Ringworm	....	....	....	....	When examination reveals no broken off, diseased hairs
Scarlet Fever	1 to 8 days, usually 3 to 5	2nd	5th	10 days	When desquamation, sore throat and albuminuria disappear, but never in less than 6 weeks.
Smallpox	12 to 14 days	3rd or 4th	9th or 10th	16 days	When every scab has disappeared.
Typhoid Fever	7 to 21 days, usually 10 to 14	8th or 9th	21st	23 days	
Typhus	5 to 14, very variable	5th	14th	14 days	After 4 weeks.
Whooping Cough	7 to 14 days	The whooping may not appear for 3 weeks, although infectious before then.	....	21 days	In 5 weeks from the commencement, provided all spasmodic cough and whooping have ceased for at least 2 weeks.

Phillips' Phospho-Muriate of Quinine, Comp. promotes recovery, and hastens convalescence from infectious diseases.

(OVER)

50
113
910

The supreme court of Missouri, in rendering a decision recently, said in part as follows: "The practice of medicine is not confined to the administration of drugs, nor is surgery limited to the knife. When a physician advises a patient to travel for his health he is practicing medicine. Broadly speaking, one is practicing medicine when he visits his patient, examines him, determines the nature of the disease and prescribes the remedy he deems appropriate."—Medical Council Feb 1913

PREFACE

In presenting this modest little book to the medical profession I do not claim but very little originality, but have tried to collect and present pointed truths that would be of practical benefit to the whole profession.

I have given each writer credit for their article when possible, some I have been unable to find any name attached, these I sincerely beg pardon.

I trust that each and every purchaser will be well pleased and benefited.

In conclusion I desire to express my appreciation and thanks to each and every contributor, and to the jolly-good fellows everywhere.

J. H. M.

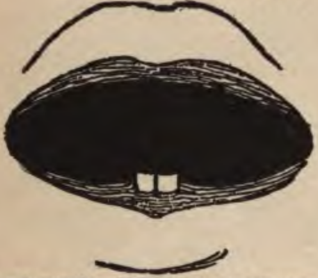
TABLE V.

E ERUPTION OF THE TEETH

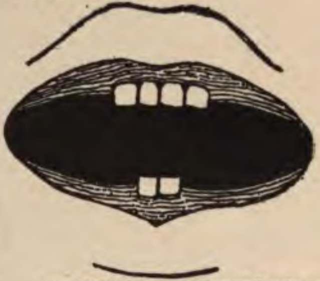
rder and time of eruption are as follows:

incisors, 6-9 months.
incisors, 8-12 months.
later incisors and four anterior molars, 12-15 months
s, 18-24 months.
ior molars 24-30 months.
child should have 6 teeth.
ars a child should have 12 teeth.
at 2 years a child should have 16 teeth

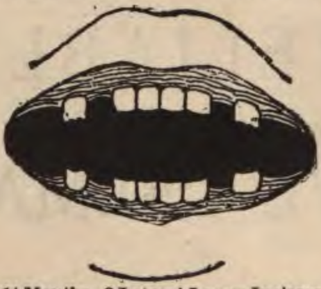
TEETHING CHILDREN



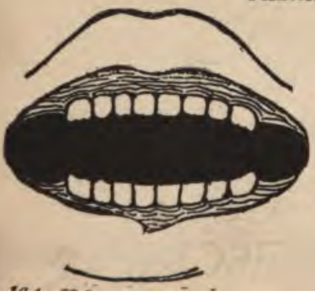
6 to 8 months—2 Middle Lower Incisors.

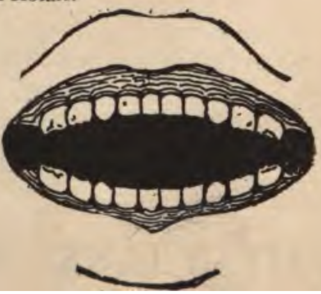


8 to 10 Months—4 Upper Incisors.



12 to 14 Months—2 Lateral Lower Incisors, and 4 Anterior Molars.





A BOOK OF PRACTICAL POINTS

THE PRAYER OF AN EGYPTIAN PHYSICIAN

By thy grace I have been called to watch over sickness and health of men, and I make ready now to start in the professional work of the day.

Be my strength, good Lord, in this great undertaking, and bless my work that it may be good. Let me be filled with love of man and my art, and do not let desire for gain or position or fame interfere with my duties.

FOR THE BEGINNING DOCTOR

Don't commit suicide if all the people in town don't come to you the first year.

Don't lose your temper when the pay fails to come in. Smile.

Don't kick the dog or cat if things go wrong at home.

Don't crowd the good pay-patients too hard, or they will leave you.

Don't feel bad when cantankerous patients complain. If they were being treated by the Angel Gabriel they would find fault with the expression of his face or the cut of his wings.

Don't waste time getting mad at the dead-beats; if you can't get anything else out of them get them to "holler" for you loud.

Don't fail to make the most thorough examination of every patient and base your diagnosis on what you find—not on what the patient tells you.

A cheerful* doctor in the sick room is just as *refreshing* as is a well of water in a dry and *thirsty land.

Don't get discouraged. Ours is a noble profession, one demanding all your powers, yielding a fair income, commanding more and more of the respect of the community.

Don't keep at it too constantly. All work and no play makes Jack a dull boy. Never give up the ship.

A THOUGHT

There is no life, however common, that is not improved by doing the very best. Out of the most ordinary lives, from the coldest and most uninteresting surroundings, from the works of those who rest in unvisited tombs, come, indirectly, perhaps, the great things of the world.—*F. W. White.*

ADRENALIN FOR HEMORRHAGE

Careful investigations have shown that adrenalin has no power whatsoever when given by hypodermic injection, regardless of the amount employed. But when very weak solutions are introduced into the veins, or even injected into the muscles, distinct effects are produced. This is most important because so many doctors are using this agent hypodermically with the view of controlling hemorrhage and especially internal hemorrhages. It has also recently been shown that it is not indicated in all internal hemorrhages in any dose, but that its administration must depend upon the degree of blood pressure which is present. When a hemorrhage is severe and of short duration and the blood pressure has not fallen to any extent, adrenalin should not be employed; here the use of the nitrites to lower pressure is more advantageous. On the other hand,

Threatened Abortion. Put the patient to bed, enjo
absolute quietude, inject 1/8 or 1/4 grain Morphine a
order 2 (1/6 grain) tablets of Macrotin every hour alon
combined with same amount of Viburnin, in hot wa
Amer. Jour. Clin. Med. April 1907. P. 482]
Mist. Helonin Comp. (Schlotterbeck's), ʒi in hot water
5 or 20 minutes to 2 to 4 hours, p.r.n.

if the bleeding has been profuse and a low pressure exists as a consequence of free bleeding, the nitrites can do little good, and adrenalin may be of value, if used in moderate dose, intravenously. The dose also is important, very small doses being advisable at first. If there be no rise in blood pressure, larger ones may be injected, the object being not only to contract the small blood-vessels but to prevent the contraction of the large ones at the same time, which would antagonize the effect on the bleeding surface. The value of the nitrites in internal hemorrhage lies in their power to lower the blood-pressure and thus reduce the leakage from ruptured blood vessel. Judiciously watched, then, intravenous or intramuscular injections of adrenalin are valuable in conjunction with the simultaneous use of the nitrites.—*Emory Lanphear, M. D.*

A NICE FILTER

A nice, quick and convenient way to filter medicine, especially for hypodermic use, is to boil the water in a teaspoon over a match or other flame, then place in the spoon a bit of cotton and draw the medicine up into the syringe through the cotton. A perfectly clear solution is thus obtained.—

W. J. Foster.

CORNS, WARTS, ETC.

The undiluted glacial acetic acid, applied carefully to corns and warts, so that the healthy skin is not cauterized, will often be efficient after other means have failed. The application is made night and morning till marked soreness is felt, then the applications are suspended till the soreness leaves,

Fowler's sol
of arsenic
applied 3 or
times daily

then resumed. A toothpick or match stick makes an efficient and convenient applicator.

ARGYLL-ROBERTSON PUPIL

The loss of the reflex action of the pupils to sensory stimulation of the skin and to light, while their associated action remains, when shaded and lighted they remain absolutely motionless, but they contract with convergence of the eyes, and dilate again when the eyes cease to converge. This reflex paralysis of the iris is one of the most valuable of the early signs of locomotor ataxia.

METRIC SYSTEM

The American Association for the Advancement of Science says the following lines are all that is necessary for the physician to learn, in order to prescribe in the metric system:

1,000 milligrams make one gram.

1,000 grams or cubic centimeters make one kilo or liter.

65 milligrams make one grain.

15½ grains make one gram.

31 grams make one ounce, troy.

IRITIS

The causes are syphilis, rheumatism, gout, tuberculosis, gonorrhea, diabetes and malaria, those occurring in the course of infectious fevers, herpes zoster and cerebrospinal fever. Metabolism is causative in many cases formerly thought idiopathic. Recurring or relapsing attacks, in otherwise healthy individuals, are due to autointoxication.

—*W. M. Zintmayer.*

Chapped Hands – Ointment for –
Menthol, 12 grains; salol, 20 grains; olive oil 2
hydrous woolfat, 1 1/2 ounces. Carefully melt
gredients together, beating up while coolin

Treatment for Cigarette Habit.

The following is from the current issue of the Cincinnati Health Department *Bulletin:*

Quite a number of physicians having requested information concerning Dr. Kreb's treatment for the cigarette habit, general directions, prepared by the doctor, are given below.

"The purpose of our treatment is, *first,* to create a distaste for the accustomed smoke. This is accomplished by the silver nitrate solution and the gentian root. *Second,* to lessen the desire for tobacco.

"During the first days, the struggle is naturally the most trying. The silver nitrate solution, as stated, creates a distaste for tobacco smoke and makes smoking undesirable. Being a metallic poison, the use of it should be continued only for a few days.

"Prescriptions—(Six ounces. Cost does not exceed twenty-five cents.) Silver nitrate solution, one-fourth of 1 per cent. (Keep in colored bottle.) Use as a mouth wash after each meal, if necessary, for one week. Do not swallow any of the solution.

"Gentian root—(not the powder)—should be chewed between meals. It is slightly tonic, and an aid to digestion. It may be used for several weeks without injury. (Five cents' worth.)

"The diet for the first two weeks consists exclusively of fruits, well-baked cereal foods and milk. The best cereal foods are Shredded Wheat Biscuits, Corn Flakes, Puffed Rice, Puffed Wheat, etc., used with cream and milk. Whole wheat or rye bread, etc., may also be used. The moderate use of nuts, well masticated, is of value. Eggs and cottage cheese may also be used. *At the close* of each meal use fresh sub-acid fruits as peaches, pears, apples, pineapples, etc. Sweet milk, buttermilk, or malted milk may be used in place of tea or coffee.

While irritating and stimulating foods and drinks intensify the craving for tobacco, a grain diet, milk and fruit diet lessens it. In some special cases an entire milk diet for a few days may be beneficial; especially, if there exists an irritable stomach.

"Eliminative baths, preferably the Turkish bath, will assist in rapidly getting rid of the stored up nicotine.

"As a rule, it takes from three to six weeks to eliminate entirely the desire for tobacco. The time required depends upon how closely the directions are followed."

then resumed. A toothpick or match stick makes an efficient and convenient applicator.

ARGYLL-ROBERTSON PUPIL

The loss of the reflex action of the pupils to sensory stimulation of the skin and to light, while their associated action remains, when shaded and lighted they remain absolutely motionless, but they contract with convergence of the eyes, and dilate again when the eyes cease to converge. This reflex paralysis of the iris is one of the most valuable of the early signs of locomotor ataxia.

METRIC SYSTEM

The American Association for the Advancement of Science says the following lines are all that is necessary for the physician to learn, in order to prescribe in the metric system:

1,000 milligrams make one gram.

1,000 grams or cubic centimeters make one kilo or liter.

65 milligrams make one grain.

15½ grains make one gram.

31 grams make one ounce, troy.

IRITIS

The causes are syphilis, rheumatism, gout, tuberculosis, gonorrhea, diabetes and malaria, those occurring in the course of infectious fevers, herpes zoster and cerebrospinal fever. Metabolism is causative in many cases formerly thought idiopathic. Recurring or relapsing attacks, in otherwise healthy individuals, are due to autointoxication.

—*W. M. Zintmayer.*

Chapped Hands—Ointment for—
Menthol, 12 grains; salol, 20 grains; olive oil 20
hydrous woolfat, 1½ ounces. Carefully melt
gredients together, beating up while coolin

Treatment for Cigarette Habit.

The following is from the current issue of the Cincinnati Health Department *Bulletin:*

Quite a number of physicians having requested information concerning Dr. Kreb's treatment for the cigarette habit, general directions, prepared by the doctor, are given below.

"The purpose of our treatment is, *first,* to create a distaste for the accustomed smoke. This is accomplished by the silver nitrate solution and the gentian root. *Second,* to lessen the desire for tobacco.

"During the first days, the struggle is naturally the most trying. The silver nitrate solution, as stated, creates a distaste for tobacco smoke and makes smoking undesirable. Being a metallic poison, the use of it should be continued only for a few days.

"Prescriptions—(Six ounces. Cost does not exceed twenty-five cents.) Silver nitrate solution, one-fourth of 1 per cent. (Keep in colored bottle.) Use as a mouth wash after each meal, if necessary, for one week. Do not swallow any of the solution.

"Gentian root—(not the powder)—should be chewed between meals. It is slightly tonic, and an aid to digestion. It may be used for several weeks without injury. (Five cents' worth.)

"The diet for the first two weeks consists exclusively of fruits, well-baked cereal foods and milk. The best cereal foods are Shredded Wheat Biscuits, Corn Flakes, Puffed Rice, Puffed Wheat, etc., used with cream and milk. Whole wheat or rye bread, etc., may also be used. The moderate use of nuts, well masticated, is of value. Eggs and cottage cheese may also be used. *At the close* of each meal use fresh sub-acid fruits as peaches, pears, apples, pineapples, etc. Sweet milk, buttermilk, or malted milk may be used in place of tea or coffee.

While irritating and stimulating foods and drinks intensify the craving for tobacco, a grain diet, milk and fruit diet lessens it. In some special cases an entire milk diet for a few days may be beneficial; especially, if there exists an irritable stomach.

"Eliminative baths, preferably the Turkish bath, will assist in rapidly getting rid of the stored up nicotine.

"As a rule, it takes from three to six weeks to eliminate entirely the desire for tobacco. The time required depends upon how closely the directions are followed."

Bad Breath Remedy.

Oral Antisepsis.

P. Carles, in *Lyon médical* for July 21, 1912, is credited with the following solution for use in the presence of malodorous breath or of beginning dental caries:

℞ Tincturæ iodi ....20 grammes
Potassii iodidi .... 1 gramme
M. ft. solutio.

From one to three drops of this are to be placed in a quarter glassful of tepid water and the mouth carefully rinsed therewith each day. With solutions of this strength the teeth are not rendered yellow even after the iodine has been used for several months.

Surgical Suggestions.

think every case of summer colic is gall-stone dis-
he principal points in the diagnosis of the latter af-
re nausea and vomiting, pain with colic, fever,
and tumor. We had all of these in a case lately,
tient had a tapeworm. Jaundice may be absent in
s; in fact, in many cases of gall-stone disease the
is overlooked because there is no jaundice.—*Amer.*
rg.

A Diagnostic Sign in Gall-Stones.

New York, tells of finding a physical sign in
hich has never failed him nor been absent in
delithiasis in the many years that he has ob-
sts of finding a painful point midway be-
and the costal cartilage of the ninth rib
ondrium.

ding the sign is as follows: Place the
bent position with arms and legs ex-
midway between the umbilicus and

DIAGNOSIS OF MAMMARY CANCER

Bloodgood emphasizes the method of bringing out dimpling which may be looked upon as pathognomonic of carcinoma. If the breast about the tumor is grasped with both hands and pushed forward, dimpling will only be observed when the tumor is malignant. A benign tumor will bulge.

TO PALPATE FOR GALL STONES

Outline the free border of the liver and locate the notch. Place the palm of the hand on the abdominal wall, with the tips of the fingers pointing toward the patient's head. Then gently press in and upward, so that the tips of the fingers are below the liver border. Then get the patient to laugh or cough. If the gall-bladder is not contracted it will strike against the tips of the fingers, and if there are many gall stones present it is more than likely that we will be able to feel the clicking of the stones against one another.—*Lloyd, N. Y. Med. Jour.*

SOME DANGEROUS INCOMPATIBLES

In addition to the well-known explosive mixtures containing potassium chlorate in combination with charcoal, sulphur, sugar, salol, thymol and other drugs, a mixture of potassium chlorate, calcium hypophosphate and ferrous lactate is also mentioned. A mixture of potassium chlorate, ferrous oxalate and corrosive sublimate is also explosive. An especial warning is given as to mixtures of potassium chlorate and potassium iodide.

—*Pacific Drug News.*

DIAGNOSIS OF PNEUMONIA IN INFANCY

The disease presents characteristic signs on which a diagnosis may be based before the lungs are examined. The symptoms are sudden onset, depression, rapid respiration with ratio of pulse of 1 to 3, fever and usually cough. If with these are noticed flaring nostrils, pneumonic breathing and expiratory grunt, a definite diagnosis may be made, while rigidity of the neck and upper extremities without rigidity of the lower extremities, is an important confirmatory sign if present.

—Freeman, *Jour. Amer. Med. Asso.*

CYSTITIS TREATMENT

In the treatment of all cases of cystitis rest in bed, with the hips elevated, will often give more or less relief from the strangury and the constant desire to urinate; by elevating the hips the urine accumulating in the bladder flows away from the most congested and sensitive part of the bladder. Heat to the perineum and above the pubes, and hot sitz baths will greatly relieve the tenesmus, and to some extent lessen the congestion of the mucous membrane of the bladder. If the urine is acid potassium citrate or bicarbonate will render the urine less irritating. If the urine is alkaline benzoic acid or benzoate of ammonium will prove helpful; if an antiseptic is desired give salicylic acid; if contraindicated, give boric acid in powder form, 10 to 20 grains; collateral treatment consists of rest in bed, plenty of cold water, milk, bland and mild food, laxatives, hot sitz baths or vaginal douches, irrigation of the bladder with boric acid solution followed by solution of nitrate of silver.

Two of the severest cases of cystitis I ever saw or treated responded promptly to the clean-out method and Abbott's Calcalith, in connection with specific cannabis (Lloyd). Calcalith has the following formula: Calcium carbonate, grs. 10, lithium carbonate, gr. 1; and colchicine, gr. 1-500; in aromatic combination.

AN EARLY SIGN OF PHTHISIS

Lampadaries has discovered that a tubercular rale may be heard in the upper part of the lung when the patient is lying down, for some time before the sign is apparent on standing, and even in some cases before the appearance of the tubercle bacilli in the sputum. The lesson taught, therefore, is to examine our patients in the recumbent position for incipient phthisis, as well as for pleurisy and heart disease.

HEMOPTYSIS

The value of amyl nitrite by inhalation in controlling pulmonary hemorrhage has received many corroborations during the past year. Three to five minims administered in this way usually stops the hemorrhage promptly. For small recurrent hemorrhage sodium nitrate has been found valuable providing the blood pressure is high.

—*Hahnemannian Monthly.*

A FORMULA FOR MAKING SPLINTS

This formula for the manufacture of a firm and durable splint—very valuable in the fixation of certain fractures after the swelling has subsided—

has been sold to many physicians for ten dollars, or more.

Powdered starch	oz. 1
Isinglass or gelatin	oz. 1
Solution of potassium salicate	qt. 1
Pulverized boric acid	oz. ½

Mix the starch with the solution of silicate of potash by shaking from a pepper-box and stirring constantly till mixed. Reduce the gelatin to the consistency of mucilage with boiling water and mix well with the first two. (Better soften with cold water first.)

Then put into a jug of double the capacity and ferment at room or sun temperature for three or four days.

Then add the boric acid, mix well, and it is ready for use.

If too thick after standing, thin it with boiling water. Keep corked.

Apply a silk stocking or roller bandage; then a coat of the preparation with a brush, and repeat till three or four layers are applied, or until the splint is thick enough. It may be cut after hardening and eyelets and laces put in.—*C. H. Gallagher.*

JUNKET

Have the milk at body-heat; add one-half to one teaspoonful of Fairchild's essence of pepsin or Parke, Davis & Co.'s pepsin cordial to a pint of milk. Place the milk in a cool place, and after the curd has formed serve cold and flavor with powdered nutmeg or vanilla. If there be too great feebleness of digestion to digest the curd, the liquid whey

Humanized Milk.

The following is stated to be the formula for such a preparation:

Fresh Milk	3 pints
Cream	3½—4 fl. oz.
Milk sugar	2¼—3 oz.
Dist. water	36 fl. oz.

Dissolve the milk sugar in the distilled water and mix with the milk and cream. Transfer to bottles filled only to the shoulder, place the bottles in cold water, and boil the latter then for half an hour; then cork the bottles and continue the boiling for about half an hour longer.

The following has also been recommended as a method for humanizing milk: Boil or sterilize half a pint of cow's milk. Take another half a pint and skim it, and add the skim to the first half-pint. Crush a tablet containing sufficient powdered rennet to curdle half a pint of milk, 1½ grains of sodium bicarbonate, ½ grain of calcium phosphate, and 5 grains of lactose, and when the skimmed half-pint has been heated to 100 deg. Fahr., add the crushed tablet, stir, and keep at about the same temperature for twenty minutes, separate the curd thus produced, and then boil the whey for two minutes. Add this whey to the first half-pint, and to this mixture add 3 ounces (6 tablespoonfuls) of boiled or sterilized cow's milk. Soak all vessels used in boiling water before and after use.—Physicians Drug News.

may be given, as it contains the salts and albuminoids of milk.

RICE-WATER

Rice-water is made by boiling two ounces of clean rice in two quarts of water for an hour and a half.

PEPTONIZED MILK

Take a perfectly clean clear glass quart bottle and place in it one of Parke, Davis & Co.'s peptonizing tablets, or the contents of one of Fairchild's peptonizing tubes, and a teacupful of cold water, and after shaking pour into the bottle a pint of perfectly clear, cool, fresh milk and stir the mixture thoroughly. Next place the bottle containing the milk in a vessel of water at such a temperature that the whole hand may be submerged in it without pain. If complete digestion of the milk is desired, this application of heat may be continued as long as twenty minutes, but in most cases five minutes are sufficient. If carried on longer than five minutes, the milk will become bitter and disagreeable to the taste through the development of peptone in excess.

Immediately after taking the bottle from the hot water it should be placed on ice, in order to check further peptonizing and to keep the milk from spoiling; or if the ice is not available the water-bath should be brought quickly to a boil in order to prevent further action of the ferment, and the bottle corked and then be put in a cool place. This receipt may be used where it is thought necessary to digest the milk before it is swallowed. Where we desire simply to aid digestion it is best to follow the directions already given, except that the bottle is not heated, but at once placed on ice and allowed to remain there, being slightly warmed when it is desired to give it to a child, or it may be given as a refreshing drink to an adult, the heat of the body rapidly causing the ferment to do its work as soon as the food enters the stomach.

PEPTONIZED BEEF

Take one-half pound finely minced raw, lean beef; cold water one pint. Mix in a sauce-pan. Cook over a gentle fire, stirring constantly until it has boiled a few minutes. Then pour off the liquor for future use, beat or rub the meat to a paste, and put into a clean fruit-jar with one pint of cold water and the liquor poured from the meat, and add

Extract pancreatis	grs. 40
Sodium bicarbonate	grs. 30

Shake well together, and set aside in a warm place, at about 110° to 115°F., for three hours, stirring or shaking occasionally; then boil quickly. The liquid may then be strained or clarified with white of egg in the usual manner, and seasoned to taste with salt and pepper.

PEPTONIZED OYSTER

Mince eight large oysters, and add to them when mixed with a moderate amount of their own liquid, 6 grains of pancreatin or peptonizing powder and 20 grains of bocarbonate sodium. Place in a vessel of water at 100°F., and allow to remain from ten to twenty minutes. After this the liquid mass is quickly brought to a boil to cook the oysters and stop digestion, and serve with pepper and salt as required. Any condiment or flavoring substance may be used.

Sycosis of the Beard - apply Red Precipitate ointment. [Am. Jour. Clin. Med. July 1913, p. 557]

Chilblains - are cured by the internal use of calcium salts.

ARROW-ROOT

This is very nourishing and light, either for invalids or infants; make it with milk or water. Put a pint of either into a stewpan, make it boiling hot, add a little salt, put a heaped teaspoonful of ground Bermuda arrow-root into a cup, make it smooth with cold milk, stir it into the stewpan, and let it simmer for two or three minutes; then turn it into a bowl, sweeten and grate nutmeg over it, if liked; should it be preferred thin, use less arrow-root. This should be made only as much as is wanted at a time, since it will become as thin as water if heater over.

MUTTON BROTH

Is relished by some patients, and should be made as plain as possible and so as to secure the juice of the meat. Boil slowly a couple of pounds of lean mutton for two hours, skim frequently as it simmers, and do not put in very much salt. If not contraindicated some vegetables as seasoning may be added, and for some broths a little fine barley or rice is added.

LEMONADE FOR INVALIDS

One-half a lemon, lump sugar to taste, one pint of boiling water. Pare off the rind of the lemon thinly; cut the lemon into two or three thick slices, and remove as much as possible of the outside pith and all the seed. Put the slices of lemon, the peel, and lump sugar into a jug; pour over the boiling water; cover it closely, and in two hours it will be ready for use. It should either be strained or poured off from the sediment.

By adding the beaten white of egg makes it nourishing.

FLAX-SEED LEMONADE

Four tablespoonfuls flax-seed (whole), one quart of boiling water poured on the flax-seed, juice of two lemons, peel and seed. Sweeten to taste; stew three hours in a covered pitcher. If too thick, add cold water, with more lemon juice and sugar. Good in colds, dysentery and diarrhea.

BARLEY-WATER

Put a large tablespoonful of well washed pearl barley into a pitcher; pour over it boiling water; cover it, and let it remain till cold; then drain off the water; sweeten to taste, if liked, add the juice of a lemon, and grated nutmeg.

BEEF TEA

One pound of lean beef, cut into small pieces. Put into a dry jar; cover tightly, and set in a pot of cold water. Heat gradually to a boil, and continue this steadily for three or four hours, until the meat is white, and the juice is drawn out. Season with salt to taste, and when cold, skim.

SLIPPERY ELM BARK TEA

Break the bark into bits, pour boiling water over it, cover and let it infuse until cold. Sweeten, ice, and add lemon juice, or ginger. Good in appendicitis, or any bowel disorder.

TOAST WATER

Slices of toast, nicely browned, enough boiling water to cover them. Cover closely and let steep

until cold. Strain the water, sweeten to taste. Put a piece of ice in each glassful.

TYPHOID DIET

Robertson summarizes the views of thirteen prominent clinicians in reply to his inquiries, practically as follows:

The majority of his correspondents advocate liquids, milk and eggs as the chief dietary. One disapproves of milk on the ground of its causing tympany; but the majority of patients taking that diet with impunity as against the minority is obvious. The precautionary measure cited is to discontinue the milk in case of curds, tympany, etc., but until these symptoms arise, so long as the patient is doing well and is nourished, it is useless to ignore such a valuable foodstuff.

Robertson supposes that it could be shown that almost any other of the generally advocated foods could cause, seemingly, a disagreement with the digestion. Broths might act as a culture medium, eggs are regarded as suspicious sometimes and we are advised to cut off nearly everything in tympany, etc.

Even water is possibly taken to excess at times. He knows of but two guiding lines in typhoid fever diet, and they are to nourish the patient and to have respect for the local conditions in the digestive tract.

Finally, he believes he would be safe in advancing this proposition: Give the patient a sensible nurse and an obtusely bent feeding tube, and tell her to give the patient anything that may be easily taken through it, and if curds (when milk is the staple diet) occur, to cut off the milk, using in its stead whey with essence of pepsin, or to give water for only a few days, should tympany, etc., arise.

KEEPING THE CHRONICS

It would help me and, I believe, many others, if the successful ones would answer this query, "How can we keep the chronics coming?" Some of my colleagues tell me that I hold chronics a little better than the average, but many of them stop with me just at the critical stage in spite of every effort on my part. Often they would get along faster if they could be induced to report to me oftener. Would it be unprofessional to have them to sign an agreement at the start (when they are all enthusiasm) to take so many weeks' treatment at a stated price, which fee must be paid regardless of the number of times they fail to report? This might to some extent relieve that double deterrant, the unpleasantness of going to a doctor and paying for it, too.

—S. H. R., New York.

Dr. Abbott, in answer to the above, says:

The best way to deal with "the chronics" is to cure them—if this is possible. Then when they stop coming there will be plenty of others to take their places, for the public loves the man who succeeds, and the office of such a man will never be empty for a long time. There is a class of cases in which improvement is necessarily slow and in which to secure good results it is desirable that the physician should see his patients often and study them long and persistently. These patients readily get discouraged, lose their faith in the doctor and are continually flitting from one to another. Start right with these patients. Let them see that you propose to go to the

bottom of the trouble, making your investigation of the physical signs of the disease exhaustive, detailed; go over every organ, every function; study blood, feces, urine, sputum. This not only gives you valuable knowledge which may be the key to treatment, but it makes a profound mental impression upon the patient and his friends.

Insist upon the importance of keeping them under the closest observation for a long time, so that every factor may be studied. If the condition is one in which you can promise relief and the probability of cure, tell them so—positively, firmly and with some show of enthusiasm. Let your patients see that you have "red blood" in you, and win their affections by a genuine show of human sympathy. With the knowledge at your disposal you should now be able to do this. Think over these facts, separately and collectively, and make them a basis for your therapeutic indications.

Remember that in practically every condition great and sometimes simply wonderful improvement will follow a thorough cleaning out of the bowels. In very, very many cases it isn't half done. This is particularly true in the "chronics," where all the functions are sluggish and where the bowels may move daily, while all the time a stinking, poisonous cess-pool of retained feces reposes peacefully in some neglected intestinal by-way. If there is the slightest suspicion of such a condition go at the matter from both ends, till there is no longer a question. Then "keep clean." As general principles, almost universal in application, remember our much-repeated "success points," i. e.:

To equalize the circulation.

To eliminate waste.
To stop autotoxemia.
To maintain systemic asepsis.
To stimulate innervation.
To feed the tissues.

Keep these general things in mind, and then seize upon the special indications; this done, we think you will not have much trouble in keeping the chronics coming.

THE PREVENTION OF BED SORES

The following applied as a varnish twice daily to the parts menaced, will act as a preventive of bedsores:

Guttapercha	dr. 1
Chloroform	dr. 1
Balsam of Peru	gtts. 15

Also the oxide of zinc ointment rubbed in over the exposed points is excellent.

EVILS OF EXPECTANT TREATMENT

A. Jacobi says that expectant treatment has been the cause of many deaths; that often death resulted when proper treatment might have saved the patients. That expectant treatment often is a compound of ignorance and indolence; often it is malpractice in cases that might have been saved by proper treatment. Expectant treatment is simply a sin of omission which frequently rises to the dignity of a crime.

PLACEBO

Dr. Wm. H. Burgess says, never give a placebo, there is no good reason for it. Any man who will

Pleuritis.

℞ Menthol, ʒss;
Guaiacol
Camphor,
Methyl Salicyl., āā ʒi;
Lanolin, q.s. ad ℥i.
M. S. Rub a small
quantity over affected
part and cover with
oil silk.

give a placebo, will cheat and steal under certain circumstances. The patient is deceived and wronged. He thinks he is taking a remedy, and if he knew that his doctor does not know what remedy is required, he would get a doctor who does know. The placebo fills the place fraudulently and effectually cuts the patient off from all the advantages to be derived from science and skill. When a man is wronged out of his chances he is deeply wronged. Natural diagnosis never leaves a man in the least temptation to give a placebo. In every diseased condition there is always a congenial drug plainly indicated and imperatively demanded. Look over your list of congenials. Calcium for strength, sodium for glandular derangements, magnesium for nervous troubles and for pain and fever, potassium for vital and mental derangements, iron for paleness, manganese for the same and for vegetative inactivity. The acids for abnormalities of the appetite, the alkaloids, as indicated, for present relief. You can not fail to find something to fit something you see. Trace the symptoms one by one back to an adequate cause. Then take this cause, or causes, and reason out all its necessary effects, present and future. Be sure that you give the case more thought than any one else obtainable would give it, then a gentleman's conscience would not smite him for filling the place some one else less efficient would, otherwise, certainly fill. (I think Dr. Burgess one of the greatest living physicians; and that every man who practices medicine should have his wonderful little book, "The New Field.")

IDENTIFICATION OF GALL STONES

According to A. Steensma, gallstones can be identified very easily, owing to the fact that cholesterin is combustible. Gallstones burn actively in the flame of a Bunsen burner, somewhat like fireworks; other pathological concretions do not possess this property.

TEST TUBE HOLDER

The best test tube holder is a piece of harness leather about one-half or three-quarter inch wide. Bend this around the test tube and grasp the two ends between the finger and thumb. After being used a few times on the hot test tubes it retains its shape and can be left on one or another of them when not in use. It is simple, durable, efficient and cheap.

ASTHMA PAPERS

A good asthma paper is prepared by dissolving one ounce potassium nitrate in five ounces of water, dipping strips of filter paper in this solution, allowing the stips to dry, then dipping them in tincture of belladonna, allowing to dry ready for use.

—*Critic and Guide.*

TO COMBAT SHOCK

Raising the foot of the bed twelve inches may combat shock more quickly than the repeated administration of stimulants and is far less harmful to the patient. One should remember not to use this means in abdominal cases, where pus has been found in the peritoneal cavity.

THE PHYSIOLOGICAL ACTION OF DRUGS

What is the physiological action of a drug? It is its specific action, in medicinal doses, on some certain tissue or organ by means of which it is enabled to counteract certain pathological conditions of that part, and restore it to a normal (physiological) state.

I wish to protest against the custom in vogue of classing the action of excessive doses as physiological. When a drug produces symptoms which denote an abnormal condition, its action is certainly not physiological, but most emphatically toxic. How may the physiological action of a drug be determined? The usual method has been to experiment on various animals.

Unfortunately, the doses administered have generally been much too large and the good accomplished has been, largely, in determining the drug's toxicity rather than its physiological action. We have a large number of drugs whose actions are not well understood but whose place in medicine are definite and reliable, and we know the exact conditions in which they are remedial.

Why not, then, having an undoubted truth as a starter, try the Sherlock Holmes stunt and reason backward from the truth? To illustrate, the indications for the use of copper arsenite are as follows: "Diarrhea with frequent, voluminous discharges. With this there is often violent vomiting of a large quantity of watery substance, and sharp, cutting, colicky pains. The stools are tinged with green, and are usually of a stinking, nasty odor."—*Ellingwood.*

I, and thousands of others, have proven many times that when the above indications are present, copper arsenate is an absolute specific. When these indications (symptoms and signs) are present, what is the pathological cause which gives rise to them? The diarrhea and colicky pains denote intestinal irritation. The fetor and greenish color of the stools suggest an excess of bile.

This causes an irritation of the mucous lining and a profuse mucous discharge. With an excessive secretion of bile, an excessive mucous secretion, and a general irritated condition of the bowel, what must be the action of the remedy which corrects this?

It obviously must inhibit the secretion of the bile and of mucus, and probably act as an antiseptic. I have experimented in an effort to verify or disprove the above. Several times I have given podophyllum and leptandra until free catharsis was established, when I administered minute doses (1-1000 gr.) of copper arsenite. In each case the catharsis was soon checked and the stools rapidly became light clay-colored, showing that the secretion of bile had been diminished.

In a case of diarrhea with clay-colored, mushy, scabula-laden discharges, I gave this agent. The condition not only was not relieved, but was intensified. Some writers attribute a diuretic property to copper arsenite but such an action has not been apparent to me, perhaps because I have used it only in minute doses.

I think we should, by all means, establish the physiological action of drugs, and by this I mean their specific action upon the various tissues and organs in medicinal doses. The more we develop along this line, the more proficient we shall become

as therapeutists. I suggest the above as one method of study.—*Dr. G. H. Hanson.*

TO PREVENT RUSTING OF INSTRUMENTS

It has been suggested that instruments be boiled in a solution of sodium hydrate (chemically pure, one-quarter of one per cent) instead of the sodium carbonate solution commonly employed.

TO POLISH SURGICAL INSTRUMENTS

A very efficient soap for polishing instruments may be prepared by incorporating two parts of powdered emery and one part of magnesium carbonate with ten parts of tallow soap, softened with a very small quantity of water. A good polish in powder form is obtained by mixing four parts of powdered chalk, four parts of magnesium carbonate and seven parts of red oxide of iron.

THUJA OCCIDENTALIS

The action of thuja occidentalis as defined by "The Eclectic League for Drug Research," is as follows: Chronic or subacute diseases of the skin and mucous outlets, marked by low discharges, atonicity, and perverted tissue growths and changes.

The main action of thuja appears to be upon the skin, genito-urinary organs, more probably, than any other known remedy. To remove warty excrescences, polypi, and various forms of growths on the skin; reports have been made of cures by it of some cases of nævus and epithelioma. It stimulates urinary activity, causes copious and frequent flow of the urine, relieving and curing some cases of prostatic disease, and chronic urethritis, its action here being nicely shown in the relaxed conditions where dribbling of the urine ensues. In the treatment of cancer, it promises more, probably, than any other known drug. Dr. J. E. C. Waddington reports a case of so-called "rose" cancer involving the cheek of a lady nearly eighty years old, in which the effects of the drug was remarkable in checking and limiting the growth. Unfortunately, the cases was not followed up. The remedy was given internally, and applied locally undiluted. The Doctor uses it locally in all indolent ulcerations and diseases of the surfaces, and considers it far superior to balsam of peru and similar drugs. Dr. G. T. Fuller uses it in all benign fungus growths on mucoue membranes, and warty growths on the skin; hs claims it will reduce the size of the prostate gland, relieving troubles incident to it.

Dr. Eli G. Jones lauds thuja very highly in the treatment of rectal cancer, 20 to 60 drops being injected into the mass every second day. He also uses it successfully in cancer of the throat, internally, and as a spray, and in cauliflower cancer of the uterus, keeping constantly applied, a cerate, in the proportion of one part of the oil to sixteen of the cerate base. Very emphatically he says, "It is one of the few remedies we have that does have a curative action on cancer."

Its action on syphilis seems worthy of study, and all venereal diseases are benefited by it at some time in their course. It seems to have no especially poisonous action.—*Dr. W. Leming.*

LIFE

Life is a succession of lessons which must be learned to be understood.—*Ralph Waldo Emerson.*

An Agreeable Disinfectant.

The following mixture forms a thick cream, a small quantity of which, poured on a plate, soon diffuses an agreeable odor throughout the apartment, acting at the same time as an effective disinfectant:

Camphor	20 parts.
Chloride of lime	50 parts.
Alcohol	50 parts.
Water	58 parts.
Oil of eucalyptus	1 part.
Oil of cloves	1 part.

The ingredients are to be mixed secundum artem.

TO REMOVE PLASTER OF PARIS CASTS

Mark a line, with a lead pencil, on the cast. Along this line apply a little cotton or cotton-wool and soak the same with peroxide of hydrogen, the wool being about one-half inch wide. In a short time the plaster will be soft enough to be cut through with an ordinary knife or a pair of scissors. Vinegar or bichloride solution may be used instead of the peroxide of hydrogen.—*Med. Times.*

TO DISINFECT A SUIT OF CLOTHES

The sanitary inspector directs as follows: Place the clothes in a common wash boiler in one end of which a towel has been placed. Pour on the towel one ounce of formalin for each cubic foot of space. Cover immediately. Keep closed for five or six hours. Before taking out the suit, pour a little ammonia water on the towel to neutralize the formaldehyde and remove the odor from the clothing.

TUMORS OF THE BREAST

It is indeed strange, in view of the fact that 85 per cent of all tumors in the breasts of women have been found malignant from the beginning and that of the remaining 15 per cent at least a half become cancerous if left alone, that the "family doctor" still advises women to "wait and see what it will do." Especially is it fearful because early removal of cancer of the breast gives 85 per cent cures and only 15 per cent recurrence; whereas, by late operations only 25 per cent can be cured.

Every doctor ought to know these things. Yet thousands there are who jeopard the lives of their patients by "hoping the tumor may prove to be one of the insignificant 15 per cent made up of cysts, fibroadenomata mastitis, etc., instead of the fatal 85 per cent, and this in the face of the fact that operation is painless, is safe and is curative.

That any kind of a doctor will permit a patient with a tumor (not an ulcerating one) to apply "pastes" or use the X-ray instead of urging operation shows there are moral cowards in our profession, or worse; men who will deliberately treat such a case for the money to be obtained thereby instead of sending the patient to a competent surgeon instantly upon discovery of a suspicious growth. The story of the lives thus sacrificed to ignorance or cupidity has never been told; nor can it be, for the details are too nerve-wrecking even for stoics of our profession.

—*Dr. Emory Lanphear.*

GONORRHEAL TREATMENT

The most up-to-date method is as follows: In the acute state with alkalies, and the anterior urethra with astringent injections of five grains each of sulphate of zinc, alum and phenol, with one dram of glycerine to four ounces of distilled water; this injection to be used three times a day after washing out th anterior urethra with hot water. Where there is grea inflammation about the glands with possible lymphatic complications, omit the injection and employ diluents, hot baths and purgatives. If the above injection is ineffective a stronger one is employed of ten grains of the sulphate of zinc and one-half ounce of fluid extract hydrastis in four ounces of distilled water. If this does not prove strong enough, then use an injection composed of ten grains of

Venereal Prophylaxis.

Venereal prophylaxis after contact is accomplished by a wash of 1:500 bichloride solution for the penis, a 20% argyrol or a 2% protargol injection for the urethra, and a 25% to 35% calomel ointment for the glans and prepuce. —*The Chicago Medical Recorder.*

sulphate of zinc, fifteen grains of acetate of lead, one dram each of the tincture of catechu and tincture of opium in four ounces of water. Many prefer protargol to any other agent in the treatment of acute gonorrhea limited to the anterior urethra. The proper method is to inject the anterior canal with a one-half per cent solution four times daily, preceding the injection by urination, and holding the solution in the canal for ten minutes.

When the posterior urethra also is involved, irrigation of the bladder by the valentine method is to be employed. Calcium sulphide is an ideal remedy, given in 1-2-grain doses every hour until saturation, then in larger doses at longer intervals. This treatment (especially in the female) saves many mutilating operations.

The female should take hot permanganate vaginal irrigations, the strength may vary somewhat with the seriousness of the conditions.

In the male, and especially those who have a long prepuce, instruct them to grasp the loose skin between the thumb and finger and fill same full of urine several times each time they urinate; this keeps the glands clean and ofttimes saves circumcision.

THE QUESTION OF DOSAGE

Take any acute malady, such as pneumonia: What is it that kills the patient? Evidently the obstruction, the pulmonary paralysis. But if one has recourse at first sight to strychnine, and especially if pushing it to a complete arousing of the vital forces, he will prevent the catastrophe.

One must not permit anatomopathologic lesions to be established, such as the organicians plead as an excuse for their failure to do or try to do.

This applies equally to all inflammations; for what is an inflammation but a lack of antagonism between the moderator nerves and the excitor nerves. Fever, fever due to an excess of viscosity of the blood, is characterized by a conflagration that devours the whole organism if it is not arrested in time by stifling it under the energy of the proper remedy. Under the influence of a physical or moral cause the heart precipitates its action and launches the blood with a force incompatible with the physiologic state upon the point or the organ whence the excitation came.

It is the excitor nerves that overcome the moderator nerves, the pneumogastric—representative of the animal sphere—that is vanquished by the great sympathetic, representative of the vegetative sphere.

What should be done? Enfeeble the organism in general, by bleeding and low diet? But this only increases more and more the loss of equilibrium between the forces of life, and depresses the balance on the side of death. On the contrary it is necessary to oppose a tight rein to the courser that runs away —the perturbed heart. For this reason Burggraeve at the debut of acute maladies employed strychnine, adding the appropriate calmants, aconitine, veratrine, hyoscyamine, morphine and quinine, combined with arsenic or iron. One does not give a single medicament, but as many as there are indications to fulfil. These may be general or particular. In fever it may be necessary to lower temperature by the incitants and defervescents—strychnine, veratrine, aconitine—and also to combat such symptoms as

pain and spasm by morphine, hyoscyamine, atropine; and to re-establish the secretions by digitalin, scillitin, colchicine. In inflammations it is necessary to fortify the organism in general, while one diverts the nervosanguine flood from the point where it tends to gather and produce irreparable disorders. We arrive at the dosology, which is the important point, since on the one side we obtain no effect, and on the other we risk poisoning the patient; for with our energetic medicaments the quantum satis should be more rigorous than with other remedies which one measures with the eye, so banal are the prescriptions. What matters a gram or less in a portion known to be inoffensive? It is for this reason that we proceed by minute doses, repeated at intervals so close that the lesion has not time to establish itself, just leaving time for absorption—fifteen minutes as the average. One may go on thus to the therapeutic effect, regardless of the quantity required. Thus at the debut of a pneumonia twenty or thirty granules of veratrine may be necessary to induce defervescence. Bremond gave a boy of sixteen forty-eight granules of aconitine to obtain resolution of pneumonia.

When strychnine is combined with the defervescents the effects of the latter will be much more prompt than when it is administered alone.

In a case of acute rheumatism Burggraeve gave veratrine and strychnine sulphate, a granule each every quarter hour for ten doses; by which time the fever had subsided and the rheumatism was reduced to a simple arthritis, easily managed by iodine applications. What happens if the fever is allowed to go on, under the pretext that it is the result, the necessary one of the arthritis? The inflammation fixes itself on the histologic organs, generally on the pericardium.

The question is not as to doses maximal or minimal, but as to the curative effect, and this can be fixed with more security if one proceeds gradually. For very active medicaments the granules are dosed at 1-2 milligram each, without reference to age or sex. The resistance of the remedy depends on the intensity of the disease. Aconitine in a healthy individual may determine aconitism at the second or third granule, but in an acute pathologic state it can be given in doses relatively enormous before it induces relaxation of the circulation and respiration. Tolerance establishes itself gradually, and thus there is no danger, since when the desired result is induced the remedy is lessened or stopped.

For instance, with a temperature of 104 degrees we give veratrine every quarter hour; when it has fallen to 102.5, we make the dose every half hour; and as the fever falls the doses are spaced at every hour, and so on.

Without a thermometer one may be guided by the general condition of the patient, the moisture of the skin and slowing of the pulse.

From this it results that one need have no fear in employing alkaloids as powerful as strychnine, aconitine and veratrine at the debut of acute maladies, any more than one would in giving quinine for ague, for every fever should be broken.

In surgery the gravity of accidents depends on traumatic fever, but that is not fatal because it can be treated. Chassaignac instituted for operatives what he called the surgical dissipation (l'entraine-

ment chirurgical) by means of aconitine given for several days before operation. Helot took the same precaution before a laborious accouchement.

So in medicine, where fevers may be foreseen. Neimeyer cited pneumonias brought to resolution without fever, by applying ice and giving veratrine.

While we have faith in the vis medicatrix naturæ, we come to her aid. Strychnine is necessary at the debut of acute affections, because it is needed to oppose paralysis of vessels and parenchyma. Strychnine, especially the arsenate, is the vital incitant par excellence, which arouses the latent force mentioned by Barthez, and which the ancients recognized when they said that in adynamic maladies the nerve power was bound up in the abdominal ganglions. This force is liberated by strychnine, aconitine, veratrine, hyoscyamine, acting on and calming the vasomotor system. Note the effects of these in acute gastralgia which, without them, would end in gastritis. So in great inflammations, meningitis, pleurisy, carditis, peritonitis, neuralgias of the splanchnic serosa; we must treat them thus if we do not wish to see the complications that so often render these maladies mortal.

The discovery of the alkaloids has been one of the great facts of contemporary medicine. We are guilty of lese humanite in not employing these agents which chemistry and pharmacodynamics have put at our disposal. Among these we place in the first line strychnine, which is to individualized living force what electricity is to all nature, an incitant of vitality; and without vital force we can do nothing. People have a false idea of strychnine, because it has been badly employed. If given in paralysis without regard to its nature, as in nerve softening, it will provoke electric shocks not within its scope; but if employed in affections purely dynamic or vital, especially if given gradually, it does not give rise to any shock or commotion, but tonifies the tissues. It is king of vital modifiers.

—*Amer. Jour. Clin. Med.*

RESTORATION FROM DROWNING

About five years ago a little five-year-old boy fell into the lake in the park across the way from my office. I was not in the office when the accident happened, or I would have been on the spot when he was taken from the water. The body was carried under the ice, and the park policeman only recovered him after several failures, because he was obliged to come to the surface for air three times. After he was taken into a house near by it was fully thirty minutes before I was called, as the physician with the police patrol ambulance had worked over the boy nearly that length of time, and had given him up, saying he was beyond his help.

He had been rolled, the Sylvester method of artificial respiration tried, stimulants had been administered, and everything usually done had been done, and yet there was no sign of life. When I reached the house I found the boy cold and lifeless. I picked him up and carried him over my shoulder and ran up two flights of stairs to the bathroom, had hot water turned on, and immediately put the body into the water as hot as I dared apply it without injury to the skin. With a pitcher, the water was poured from a height on the surface of the body, also over his neck, shoulders and spine. After a

few minutes I began a system of regular tongue traction. It was then only a moment more until he made an effort to breathe.

The house of course was filled with curious and anxious people, and the ambulance physician had remained to watch my method, as he had no idea my method would restore life. When he saw him breathing regularly he said: "Well, that is quite a new trick I have learned." When consciousness had returned and breathing had become regular, I took him out of the bath tub and dried him, wrapped him in warm blankets, carried him down stairs in my arms, to give him to his distracted mother, who was standing in the hall supported by willing hands. On seeing him restored she fainted for joy.

I was happy and thankful myself that I had had the privilege of listening to Professor Whitford in his lectures, teaching us how to apply this method and assuring us of the results that would be secured by it.

This boy did not breathe for fully forty-five minutes, and if this method of Professor Whitford's had not been used, I am sure he never would have breathed again. I think every life-saving station, and every police physician, and every emergency doctor should know of this method of saving life from drowning.—*W. F. Hormann.*

TO DESTROY FLIES AND MOSQUITOES

It is said that a very simple but effective method of destroying flies and mosquitoes infesting living apartments is by placing saucers containing a ten-per-cent solution of commerical formaldehyde on tables and window sills near the places infested by the flies. Thousands are killed in a day. The saucers should be emptied of the dead flies and replenished with fresh solution once a day.

INDICATIONS FOR BROMIDES

1. To produce sleep.
2. In hysterical conditions without neurasthenia.
3. In acute cerebral excitement.
4. In inflammation of the meninges.
5. In convulsions caused by irritation of the brain or spinal cord (uremia, tetanus, hydrophobia).
6. In epilepsy.
7. As an antidote in strychnine or other convulsive poisoning.
8. To prevent cinchonism.

The only justification for administering bromides for long periods is in epilepsy, and in this disease it is a symptomatic treatment, though it seems at times to be curative. The size of the dose that should be used, the total amount and the length of time that the drug should be given must be decided by the symptoms of the disease and by the action of the bromides on the individual patient. However, by greatly diminishing the amount of sodium chloride allowed in the food, it has been proven that therapeutic effects may be achieved from the bromides in epilepsy with much smaller doses than formerly were given.

VARICOSE VEINS

Instruct the patient to carry always a tight ball. In case of rupture and consequent hemorrhage it requires no skill to apply the ball to the point of rupture and bind down tightly with the handker-

WORKING SOLUTIONS OF FORMALIN.

Dr. G. E. Crawford (*National Medical Review*, July) in an article on Formalin as an Antiseptic in General Surgery, Gynæcology, and Obstetrics, gives the following formulæ. The four per cent. solution is thus made:

Formalin................5 ounces
Sterilized Water........7½ pints, mix

From this the following working solutions may be readily prepared:

One-eighth per cent. Solution.—Half oz. 4 per cent. solution to 15½ oz. water, equals ⅛ per cent. formalin or 1 in 2,000 formaldehyde.

One-quarter per cent. Solution.—One oz. 4 per cent. solution to 15 oz. water, equals ¼ per cent. formalin or 1 in 1,000 formaldehyde.

Three-eighths per cent. Solution.—One and one-half ounce 4 per cent. solution to 14½ oz. water, equals ⅜ per cent. formalin or 1 in 666 formaldehyde.

One-half per cent. Solution.—Two oz. 4 per cent. solution to 14 oz. water equals ½ per cent. formalin or 1 in 500 formaldehyde.

Five-eighths per cent. Solution.—Two and one-half oz. 4 per cent. solution to 13½ oz. water, equals ⅝ per cent. formalin or 1 in 400 formaldehyde.

One per cent. Solution.—Four oz. 4 per cent. solution to 12 oz. water, equals 1 per cent. formalin or 1 in 250 formaldehyde.

PUS.

The following simple method for examining the gonococci of purulent ophthalmia is suggested by Dr. W. B. Canfield. A little of the pus is pressed between two cover glasses, which are then drawn apart. The glasses are allowed to dry and are quickly passed through a Bunsen flame to coagulate the albumen and fix the pus. A few drops of the ordinary methylene blue or violet are allowed to cover the specimen for a few minutes and washed off, after which the specimen may be examined in water or glycerine, o may be dried and mounted in balsam, w makes it more distinct. —*Microscopi rnal.*

chief. This will in all cases preserve life and strength until the arrival of the physician.—*Hirst.*

A DIFFERENTIATION

A medical writer makes the following distinctions in defining illusion, hallucination and delusion:

1. An illusion is a false perception of a real sensorial impression.
2. An hallucination is a false perception without any material basis.
3. A delusion is a false belief; the patient accepts his false perceptions as facts.

TO REMOVE SILVER NITRATE STAINS

Silver nitrate stains may be whitened, and their removal expedited, by the application of

Mercury bichloride	0.65 gramme
Ammonium chloride	0.65 gramme
Water	6.00 cu. cent.

Apply with friction.—*Lancet-Clinic.*

TO ABORT FURUNCLES

The following solution is made:

Iodine	oz. i
Acetone	ozs. ii M.

After standing about fifteen hours the solution becomes black and syrupy, when it is ready to be applied, by means of a piece of absorbent cotton wound round the point of a wooden toothpick, and saturated with the solution, this being passed lightly over the boil so as to blacken its surface. Repeat in twenty-four hours, if necessary.

NITRATE OF SILVER STAINS can be removed from the skin by painting with *iodine, and after a time applying ammonia.*

"GREEN-STICK" FRACTURE

It is not necessary in all cases to complete a green-stick fracture. The rule should be to correct the deformity so completely that there is no tendency for it to recur when the force of the surgeon's fingers is removed. Once corrected the deformity does tend to recur.—*Foote.*

CHRONIC CONSTIPATION

Chronic constipation is often cured in a short time by having the patient wear an abdominal bandage. In a great many of these cases the constipation is due to enteroptosis, especially gastroptosis, causing a descent of the colon and occlusion of the same. Rontgenologic examination shows the good action of the abdominal bandage. Regular and normal defecation is generally accomplished in a few days.—*Liebman.*

GASTRIC CARCINOMA

It is in carcinoma or at the pylorus, really in that class of cases forming the majority, that the surgeon can do the most good. Two lines of treatment are open to him. In a good number of cases it will be justifiable for him to excise the growth, to make an attempt at a curative operation. This is possible only when the lymphatics affected can also be removed, and when the adhesions and extension of the growth are not so far advanced as to render radical operation hopeless.—*Deaver.*

EPILEPSY

When Jacksonian epilepsy has followed an injury in the motor region, the chances of effecting a cure

are much better than they are when the epilepsy has followed an injury in the sensory region. When it has followed an injury in the frontal region, operation affords very little hope of a cure. The earlier the operation, the better the prognosis.

—*Da Costa.*

TO DISGUISE CASTOR OIL

Klein recommends the following method of administering castor oil, which he has learned from the Arabs: Pour 15 to 20 grammes of castor oil into a glass of milk, and warm the mixture with frequent stirring. In a few minutes an emulsion is formed, which may be sweetened with orange peel syrup. In this form the oil loses its disagreeable taste and, besides, smaller doses are needed to obtain the desired result. Fifteen to twenty grammes will usually be sufficient to act as a purge in the adult.

Another method of disguising the taste of castor oil in a certain hospital is as follows: A powder composed of gum arabic, licorice and sugar of milk, flavored with vanilla, is made. A small amount of the powder shaken with a little water produces a persistent froth, which forms an effective disguise.

INDICATIONS FOR THE REMOVAL OF DRESSINGS

1. The removal of stitches.
2. The removal of drainage tubes.
3. Saturation of dressings by an abundant discharge.
4. Soiling of dressings by feces, urine or vomited matter.
5. The disturbance of the dressings by a restless patient.

6. Pain if it is due to pressure, and especially if it is of a pulsating character.

7. The occurrence of secondary hemorrhage.

8. Fever, if it points to some trouble in the wound.—*Roth.*

FEEDING BY THE RECTUM

It should be remembered that injection of nutrient material into the lower bowel excites gastric secretion, and may thus account for the pain in the stomach frequently complained of in gastric cases under rectal feeding. This is important, because rectal feeding is often advocated in gastric ulcer, in order to give complete rest to the stomach, not only from food but from the secretion of gastric juice.

—*British Med. Jour.*

THE COUNTRY DOCTOR

"An unkempt, muddy god, forsooth.

. . . .

I come to sing in praise of him
Whose soul is fat, whose purse is slim,
Whose eye sight's keen, whose foresight's dim.
For caring naught for fame or pelf,
While there's a crust upon the shelf
He works for fun and boards himself."

—*Dr. B. F. Turner.*

RHUS TOX. POISONING

Quinine sulphate is supposed to be specific in ivy poisoning. Add two drams quinine to six ounces of water and apply often, Laxatives are also in line.

To Control Rectal Hemorrhage.

J. Wagner, in the *International Journal of Surgery* for August, 1912, advises the following simple procedure: Knot together two strips of gauze, twist one in a spiral about the other, and introduce, into the rectum through a speculum, the knotted end first. Remove the speculum and pull the end hanging free from the anus. In this way a solid plug of gauze is formed in the rectum.

RECTAL FEEDING.

Meillère, in *Revue des Hopitaux*, gives the following formula for a rectal nutrient enema:

Yolks of two eggs.	
Peptone	
Purified glucose	aa 25 grams.
Brandy	
Tinct. opium	10 drops.
Sodium chloride	3 grams.
Milk, q. s. ad	200 c.c.

An Antidote for Bichloride Poisoning.

A new chemical antidote for poisoning by bichloride of mercury is announced. It depends upon the prompt conversion of the bichloride into calomel upon contact. To produce the change sodium phosphate is suspended in tepid water (not hot water). Sodium bicarbonate, chemically pure, is slowly added, stirring until effervescence ceases and the solution clears. Then a little more of the sodium bicarbonate is added to insure its excess. This solution, it is claimed, instantly converts the bichloride to the mild chloride, which can then be removed by a dose of castor oil. It is very necessary that the sodium phosphate shall be chemically pure.

The antidote must be used within from fifteen to thirty minutes after the ingestion of the poison to be entirely effectual. If further experience demonstrates its usefulness, it remains for the druggists everywhere to have the necessary reagents ready for prompt application.—*Southern Medical Journal.*

Iodine an Antidote to Carbolic Poisoning.

In the *Lancet* of August 3d, 1907, J Maberly published three cases of carbolic acid poisoning which had completely and rapidly recovered after the administration of tincture of iodine as an antidote. In one of them the treatment was not applied until 30 hours after the ingestion of the poison. Another case is reported where a drachm of tincture of iodine, well diluted, was given in two doses to a child, the first very soon after carbolic acid had been swallowed, the other one hour later, followed by prompt recovery.

Iodine forms a harmless soluble compound with phenols, *and its affinity* for phenol is very *much greater than that* for living protoplasm, *ence its unique value* for all forms of carbolic

HICCOUGH

A novel and very effective treatment of hiccough is to grasp the tongue between the thumb and finger (using a napkin), making firm traction outward and downward; and hold same for from two to five minutes and repeat as often as necessary to control the trouble.

CAUTIONARY FACTS

1. Drugs by the rectum or vagina should be given in three times the dose as by the mouth.
2. Drugs by the hypodermic method should be given in one-sixth the dose as by the mouth.
3. Be cautious in giving atropia to flaxen-haired, light complexioned, nervous women.
4. Be cautious of the use of morphia subcutaneously after opiates or morphia have been given by the mouth or rectum.
5. Chloral hydrate should be exhibited with great care.

CHEYNE-STOKES RESPIRATION

There is a regular alteration in both the intensity and rapidity of the respiratory movements, with a more or less well-defined and prolonged pause, "apnea." The breathing is shallow in its beginning and termination. It is an unfavorable prognostic omen, and is observed in diseases of the brain, toxic conditions and circulatory disturbances.

CORRIGAN'S PULSE

Is characteristic of aortic insufficiency. Its receding character is due to the non-support of the great quantity of blood thrown out by the hypertrophied left ventricle, the aortic valves not closing perfectly and permitting regurgitation. It is regular in rhythm during compensation.

HUTCHINSON TEETH

The permanent teeth, especially the upper incisors, are notched in a most peculiar manner. The cutting edge, instead of being straight with two or three little serrations, is concave from side to side; the whole of the tooth is dwarfed, and, especially at the sides, somewhat beveled off from above downward, so that it has a peg-shaped appearance. This change is characteristic; it very rarely, if ever, occurs under any other circumstances, and it is caused by and is proportionate to the stomatitis of infancy. If this is severe at the time the dental papillæ are developing, they are so much reduced in size and so altered in shape that it is almost impossible to recognize them as teeth at all. Mercurial teeth, in which the enamel is defective transversely and marked by horizontal darkened grooves and pits, are totally different, but it is not uncommon to find the two associated. In exceptional cases, in which the stomatitis has been late or prolonged, a similar change is visible in the lateral ones as well; but it is only the median of the upper jaw that are definite and characteristic.

ning Lotion.

[illegible], gr. j;
[illegible] Vini [illegible]., ʒi;
[illegible] [illegible]ntago,
[illegible] Lycopod., āā Mxxx;
[illegible]ini, ʒ iv.
[illegible]amelis, dist. ext. ʒi.
[illegible]

[illegible]
laneous cure. The following ointment may be used

℞ Resorcin, gr. x;
Sulph. Loti, gr. xxx;
Anhydrous Lanolin, ℥ij;
Adeps, q.s. ad ℥iij.
M.S.

internally, 3 grain doses o
Mag. Carbonate may be [illegible]
four times daily, with 1/10 gr. [illegible]
dose of calomel, p. r. [illegible]

Dusting Powder ("Velvet Skin")

℞ Boric Acid 1 gm.
Lycopodium, 1/2 gm.
Orris root, 7 1/2 gms.
Boro-tannate Aluminium, 1/4 gm.
Talcum, q.s. ad 100 gms.
M.

For Tender Skin.

℞ Calaminaris, 5 parts
Zinc ~~ointment~~ 50 "
M. ft. Ung. (Fischer)

Umbilical Hemorrhage

℞ Europhen,
Alum usta, āā ℥ij.
M.S. Apply after touching parts with lunar caustic. (Fischer)

Mastitis Neonatorum.

℞ Ung. Ext. Bellad. (U.S.P.) ℥ij
Ung. Hydrarg. dil., ʒi.
Cold Cream, ℥i.
M. ft. Ung. Sig. Apply on linen with tight strapping.

A FEW SIGNS AND LAWS

COURVOISIER'S LAW

Courvoisier's law, while not infallible, is of practical diagnostic import, "in cases of chronic jaundice, due to obstruction of the common bile duct, a contraction of the gall-bladder signifies that the obstruction is due to stone; a dilatation of the gall-bladder, that the obstruction is due to causes other than stone."

ROMBERG'S SIGN

Is a perturbation of muscular co-ordination; with the eyes closed, and the feet placed close together, the patient sways or may fall to the ground. To this source must be attributed the ataxic gait so characteristic of locomotor ataxia.

WINTRICH'S SIGN

Is a change in pitch of the percussion note over a vomica, when the mouth is opened or closed. A change of posture is occasionally necessary before the sign can be demonstrated.

BROADBENT'S SIGN

Is due to adhesions of the pericardium to the diaphragm, and occurs in adhesive pericarditis. There is a well marked systolic retraction of some of the lower ribs on the lateral or posterior aspect of the thorax. It is a favorable sign and shows compensatory hypertrophy.

CHVOSTEK'S SIGN

This occurs only in tetany, and consists of a sudden lightning-like twitching of the muscles of the face, particularly of the elevators of the angle of the lip and the muscles of the eyelids. It is elicited by striking the skin below the zygomatic arch just in front of the ear with the hammer.

THE KNEE-JERK

Is invariably present in health and by its delicacy and constancy is the most valuable reflex for clinical purposes. It may be elicited in a variety of ways. Perhaps the best way is to have the patient lie upon his back; then placing one hand under the knee it should be lifted several inches from the surface of the bed or table until the leg and thigh form an obtuse angle of about 120°. Then with the side of the hand. or the percussion hammer, the patellar tendon is struck a sharp blow between the lower edge of the patella and the tuberculum of the tibia. The most obvious and vigorous contraction occurs in the quadriceps of the same side, causing the leg to be tipped upward suddenly and giving rise to the name knee-jerk.

VON BECHTEREW'S REFLEX

It is elicited by tapping upon the spinal border of the scapula at or just above the inferior angle. In a majority of normal cases this causes a slight abduction, and an external rotation of the arm; apparently due to the contraction of the spinati muscles.

BAMBERGER'S SIGN

Is of importance in pericardial effusion. When the patient is sitting upright an area of dulness about the size of a silver dollar can be marked out at the angle of the scapula. Over it, dulness, increased fremitus, and bronchial breathing are made out. If the patient leans forward, the dulness and other signs of consolidation disappear, to return when he sits upright.

BACELLI'S SIGN

In purulent effusions the fremitus produced by the whispering voice is not transmitted to the hand laid over the effusion, whereas in serous effusions such vibrations are transmitted.

BARUCH'S SIGN OF TYPHOID

As soon as the patient shows a rectal temperature above 102.5° F. in the morning and 103° F. in the evening for three successive days, especially if this be accompanied by headache, dulness, or apathy, he is placed in a full bath at 90°, which is reduced to 80°, with constant friction over the body. In three hours, the temperature still being above 102.5° F., he receives another bath, five degrees cooler. This is repeated until the temperature of the bath is 75° F. If one or more of these baths fail to reduce the rectal temperature two degrees in half an hour, the diagnosis of typhoid is almost certain. The resistance of the rectal temperature to a bath of 75°F. for fifteen minutes, with friction, is almost certain test of typhoid fever.

THE COIN TEST

A valuable sign of pneumothorax is the coin-test. A silver coin is laid upon the chest and struck with another, while the auscultator applies the stethoscope opposite to the point struck, or over any part of the side extended by air. The ringing coin-sound is reproduced with great intensity. It is pathognomonic, and the outlines of the cavity can be traced by it.

METALLIC TINKLING

Is a sound believed to be due to the vibration of bubbling bronchial rales re-echoed through the air-chamber, or to drops of fluid falling from above upon the surface of the effusion. Re-echoing, with metallic quality, may also accompany the heart-sounds, and in cases in which the respiratory murmur is amphoric the vocal resonance is of the same character. Vocal fremitus is generally absent.

HIPPOCRATIC SUCCUSSION

The ear is placed to the side of the chest, and the patient's body moved suddenly by himself or by the observer. A splashing sound is heard. It can only be produced when there is air as well as fluid present in a cavity. It is characteristic of hydropneumothorax, although not present in all cases of this disease.

SEITZ SIGN

Inspiration begins harshly bronchial, then becomes faintly bronchial, the latter sound being heard also in expiration. It is said to be a positive sign of cavity.

INJURIES CAUSED BY ELECTRICITY AND LIGHTNING

Pfahl has examined a number of cases of electric shock and of injury by lightning, following the condition of patients for long periods of time. In every case loss of consciousness for longer or shorter period was the immediate consequence of the accident. Organic lesions could be demonstrated in every case with one exception. Quite frequent were burns of various degrees of severity; several patients showed scars on the top of the skull and on the soles of the feet, sites which were quite characteristic of injury from lightning, other patients gave symptoms and signs of neuritis; a number showed lesions of the eye grounds, consisting of hemorrhages and partial separation of the retina. The majority of the patients showed nervous or hysterical phenomena in consequence of the accidents. The author urges that the examination of the eyes be made as soon as possible in all accidents involving injury by electric current, so that the organic lesions caused may not be overlooked with regard to any future medical or judicial questions arising from the occurrence.

CANCER OF THE STOMACH

1. Presence of constant pain, notwithstanding careful regime, diet and proper medication, with increasing intensity, is almost pathognomonic of cancer.

2. Lack of appetite and refusal of food are noticed in cancer, which are not usual in gastric ulcer.

3. Examination of the vomited matter sometimes helps to distinguish between the two.

4. The presence of gastric tumor is decisive.

5. Equally important is a hypochlorhydria succeeding hyperchlorhydria.

ANTIDOTE FOR ARSENIC

Take muriate tincture of iron, four ounces, and in a vessel of twelve ounces' capacity mix with one dram of ammonia water; shake well, pour on a large wet muslin drainer, wring out the water. The stomach having been evacuated by emetics while the antidote is being prepared, give four fluid ounces at once, to be followed by an emetic; then give two ounces every ten minutes.—*Squibb.*

DIAGNOSTIC SIGNS OF PREGNANCY

1. The change of the body of the uterus from the shape of a pear flattened in its antero-posterior diameter to a globular form.

2. The cervix becomes wider, shorter and much softer in the pregnant than in the non-pregnant state.

3. The softening of the lower uterine segment.

When all three of the above conditions are present the patient is almost certainly pregnant.—*Well.*

CURDLED EGGS

Norman Bridge recommends these as the best form of rare-cooked eggs for tubercular patients. They are prepared by dropping unbroken eggs into a small kettle of boiling water, which is at that instant taken off the stove and set on the hearth for five to eight minutes.—*Denver Med. Times.*

TO BOIL CATHETERS

Boiling silk catheters in saturated solution of ammonium sulphate prevents them from becoming cracked and rough. Boiling for from three to five minutes causes complete sterilization, and after removal they may be used immediately, because solutions of ammonium sulphate are non-irritating to mucous membranes.—*Herman.*

LESIONS THAT SIMULATE CHANCRE

a) Artificial indurations caused by irritants applied to simple lesions; *b*) nodular lymphangitis, as occur in gonorrhea; *c*) scabies, where penile lesions are the rule; *d*) secondary indurations at the site of the initial lesion (Fournier's pseudo-chancre); *e*) secondary syphilitic papules or tubercles situated upon the genitals; *f*) ulcerative gummata of the genitals; *g*) epitheliomata of the genitals.

Chills.

The following prescription is said to be a most successful remedy to ward off a chill: ℞ Fluid extract hydrastis, fluid extract gentian aa ʒ iv; fluid extract cascara, ʒ ij; salicin, grs. xx; compound tincture myrrh, ʒ j; simple syrup, ℥ viij. Mix. Sig. Give one teaspoonful every hour for six or eight hours, so that the last dose will come one or two hours before the expected chill; at other times a drachm every three hours.

Urtic [redacted] Nettle Rash.)

Swann says A.) epinephrin solution
iven hypoderm 8 min. doses relieved
rticaria within utes, and it was cured
every instanc ose was repeated in ten
inutes.

Retention of the Urine.

In post-operative or other simple retention of u
such devices as enemata, hot-water bag over the
administration of spiritus etheris nitrosi, dipping
in hot water, and producing the sound of running
to provoke micturition, catheterization may often
in the female by the simple trick of placing the
well-warmed bed-pan in which has been poured a
of turpentine.—*American Journ. of Surg.*

RULES OF EXAMINATION OF URINE

AS APPROVED BY ASSOCIATION OF INSURANCE MEDICAL DIRECTORS (WHICH THE NEW YORK LIFE FURNISH THEIR EXAMINERS), FOUR SIMPLE AND GENERALLY USED TESTS

Uniform and satisfactory results can only be secured by careful and uniform observance of methods, and the use by medical examiners for life insurance of the following tests for the detection of albumin and sugar, in the manner described, is urged.

Clean test tubes and fresh reagents are absolutely essential. Fehling's solution should be prepared by a reliable druggist, should be kept in separate glass stoppered bottles, and should be renewed as often as once every three months. A separate pipette should be kept for each solution. (The Fehling solution prepared by E. R. Squibb & Sons, Brooklyn, New York, will be found very reliable.) Haines' solution is supposed to keep fresh indefinitely, but it is better to have this reagent freshly prepared at least once a month. Do not use concentrated nitric acid after it has become discolored.

Test for albumin should not be made or read by artificial light. Tests for sugar, if made by artificial light, should not be read until natural light is available.

DETECTION OF ALBUMIN

If urine is cloudy filter through filter paper before making any tests for albumin. Never filter through French chalk, Fuller's earth, bismuth subnitrate, magnesium carbonate, or charcoal.

Allow urine to cool before testing for albumin. Do not use albumoscope or horismascope. Apply both the heat and the nitric acid tests to every sample —one checks the other.

Never use that portion of urine to which the heat test has been applied for the nitric acid contact test.

HEAT TEST

If the urine is acid, take one-half test tube of the filtered urine, add one-sixth of its volume of saturated salt solution (five ounces to the pint), hold the tube by the lower portion and boil the upper one-third. If a cloud forms it consists of either albumin or earthy phosphates. Add two or three drops of ten per cent nitric acid, boil again, and add three drops more of the ten per cent acid; if the cloud remains albumin is present, but if the cloud entirely disappears the precipitate is phosphatic and albumin is absent.

If the urine is alkaline or neutral, take one-half test tube of the filtered urine, add one-sixth of its volume of saturated salt solution, and then a sufficient number of drops of ten per cent, or thirty-three per cent acetic acid, to render faintly acid. This must be done in all cases where the urine is alkaline or neutral, for albumin will not be precipitated from such urine by heat. When this has been done apply heat as directed in preceding paragraph.

Robert's Test for Albumen.

Dr. John W. Boyce, Empire Building, Pittsburgh, Pa., *The Urologic and Cutaneous Review,* believes:

1st. Robert's test is more convenient, more definite, and more delicate than the more popular tests.

2nd. The cases in which its extreme delicacy will prove a disadvantage do not amount to more than one in 40.

3d. Every urine which reacts with Robert's test is worthy of careful microscopical study.

It consists of one part of nitric acid, and from five to eight parts of a saturated solution of magnesium sulphate in distilled water. Such a solution is not corrosive, and a bottle of it with an ordinary stopper may safely be carried in a medicine case. It is of higher specific gravity than nitric acid, and is employed by the contact method even more conveniently. When so employed, the line of contact between urine and reagent is sharp, and no color bands whatever are formed. The presence of the merest trace of albumen shows a sharp white line, such as renders the test an exceedingly definite one.

NITRIC-ACID CONTACT TEST (HELLER'S TEST)

Take a perfectly clean and dry test tube, having caliber of about one inch (a conical wine-glass is preferable), and place into it about one inch of urine; allow concentrated nitric acid to flow slowly from a pipette down the side of the inclined test tube underlying the urine. Wait five minutes. By use of dark background look very closely for white band or cloud of albumin just above junction of acid and urine.

Or place in a test tube of large diameter about one inch of concentrated nitric acid, then incline the tube and from a pipette allow an equal amount of urine to flow slowly down the side of the tube, carefully overlaying the acid. If albumin is present, by use of a dark background a zone will be seen just above the point of contact of the urine and the acid, the intensity of the cloud depending on the amount of the albumin present. If no cloud is seen, the tube should be set aside and re-examined in one-half hour, because the reaction of albumin is sometimes slow.

DETECTION OF SUGAR

One test for sugar is sufficient, except in doubtful cases. It is not necessary to filter the urine. If urine contains more than a slight trace of albumin, remove it by boiling and filtration before testing for sugar. Always test for sugar no matter what the specific gravity.

FEHLING'S TEST

Take equal parts of the copper and alkaline tartrate solution in a test tube and then add a quantity of water equal to the combined volume of the two reagents used: the total quantity to prepare for a test need not exceed 5 c. c. (about 1 1-4 fluid drams). Boil the mixture, and if it remains clear it shows that the Fehling's solution is in good condition. Then add a few drops of the urine; warm the mixture but do not boil, then add a few more drops of the urine; warm again, and so on until the amount of urine added equals one-half the volume of test solution used. If the specific gravity of the urine to be tested is below 1020, the urine may be added in equal volume to the test solution. If sugar is present, a yellow or red precipitate of suboxide of copper appears. This occurs quickly if much sugar is present. If the amount of sugar is less than one per cent, the reduction will not appear until after several minutes—five to thirty. If a reduction does not take place in thirty minutes sugar is absent; if, on the other hand, the result of the test is still doubtful, the test tube should be set aside from twelve to eighteen hours and then the sediment examined to see if there has been any deposit of the suboxide of copper.

HAINES' TEST

Take about one dram of the solution in a test tube and gently boil; add eight to ten drops of the suspected urine and again gently boil. If sugar is present, a copious yellow or yellowish-red precipitate of copper suboxide separates; if the amount of sugar in the urine is small the reduction may require from five to thirty minutes, but if no change has taken place in thirty minutes, sugar is absent. If the result is still doubtful, the test tube should be set aside

and allowed to stand for twelve to eighteen hours and then the deposit examined for presence of a suboxide of copper.

A grayish or greenish precipitate of phosphates which is almost always thrown down by the alkali in Fehling's or Haines' solution, should not be mistaken for a deposit of sub-oxide of copper, which is always yellow or red. Simple decolorization of either Fehling's or Haines' solution by the urine should not be considered a positive reaction for sugar, for sometimes a concentrated and strongly acid urine, which is sugar free, will decolorize the copper; on the other hand, a decolorization may indicate a beginning reduction of the copper, particularly when only a trace of sugar is present. Under such circumstances it is advisable to let the test stand for twelve to eighteen hours before arriving at a definite conclusion.

URINALYSIS

Fresh normal urine is a clear, slightly aromatic fluid, slightly acid in reaction, and holding in solution variable amounts of organic and inorganic substances.

The specific gravity, from 1015 to 1020, is low when an increased quantity is passed, and high when the quantity is diminished. The normal quantity varies from forty to fifty ounces in the twenty-four hours; it is decreased by free perspiration and increased by chilling of the skin.

The specific gravity of abnormal urine is 1.003 to 1.040.

The important constituents of abnormal urine are:

Albumin.—Found in Bright's disease, infectious fevers, after the action of certain poisons, rheumatism, etc.

Sugar.—Found in diabetes, some affections of the brain and spinal cord, etc.

Pus.—May be from kidneys, bladder, urethra, vagina, etc.

Acetone.—Found in fevers and diabetes; the urine has odor of ether.

Blood.—When from kidney, urine has smoky appearance; when from ureter, vermicular clots; when from bladder, blood is bright, abundant, and shows stringy clots.

Indican.—Found in intestinal obstruction, Addison's disease and some diseases of the liver.

HOW TO EXAMINE URINE

Take a portion of the total amount passed in twenty-four hours; if this is not to be had, next best that voided in the morning. First color, reaction, and specific gravity.

TO ESTIMATE THE SOLIDS IN URINE

In order to estimate the number of grains of solids passed each twenty-four hours, measure accurately the number of ounces of urine passed during this period, record the same, and estimate by Haines' modification of Haeser's rule. Multiply the last two figures of the specific gravity of the urine by the number of ounces voided in twenty-four hours, and add ten per cent to the product.

Half fill a test tube and boil upper portion of the urine. If it becomes turbid, albumen phosphates are indicated. The addition of a drop or two of nitric or acetic acid will dissolve the phosphates, leaving any albumin.

Albumin (Heller's test).—Put one inch of urine in a test tube and gradually run one-quarter inch of nitric acid down the side, using a pipette, while tube is inclined to prevent mixing. The acid will rest at bottom of tube. Wait some minutes for the appearance of a white belt or zone at the line of contact of urine and acid. This is a coagulum of albumin.

Albumin (one of the most delicate tests).—Add four to eight drops of acetic acid to the urine. Filter until perfectly clear. Add to the urine one-sixth of its volume of a saturated solution of sodium chloride. Boil. Any cloudiness, opacity, or precipitate shows positively the presence of albumin.

Bile.—Put one dram of urine in a test tube, add a few drops of chloroform; if bile is present the chloroform will become turbid and acquire a yellowish tint, darker or lighter, according to the quantity of bile present.

Sugar (Bottger's test).—Put into a test tube equal volumes of urine and potassium hydrate with a pinch of bismuth subnitrate. Boil for a few minutes and if sugar is present the white powder turns gray-brown or black. Always test for albumin before making the above test, and if present separate it by rendering the urine slightly acid, boiling and filtering.

Sugar Moore's test).—Add to the urine half its volume of liquor potassæ. (Caution: This may give a white precipitate of the earthy phosphates, which should be removed by filtering.) Now boil; this causes, at first, a yellow-brownish color, becoming darker if much sugar is present, due to gluic, and finally to melassic acid.

Coleman states that the following drugs, when ingested, may cause the urine to reduce Fehling's solution and respond to some other tests for sugar: acetanilid; arsenious, salicylic, dilute hydrocyanic and sulphuric acids; alcohol, amyl nitrite, chloral, chloroform, copaiba, glycerine, mercury, morphine, strychnine, and turpentine.

Pus (Donne's test).—Let the urine stand for some hours for the pus to settle, then decant the clearer part. Put into the deposit a piece of potassium hydrate and stir with glass rod; the pus will become tough and gelatinous. Mucus will become thin and flaky.

Blood (Heat test).—Add a drop of acetic acid to a small portion of urine and boil. If hemoglobin is present, a red or brown coagulum will show.

Indican.—The presence of indican is shown by adding to the urine one-tenth of its volume of nitric acid. A blue tint to the urine will appear. By boiling or standing, the color deepens to an indigo red.

Acetone (Legal's test).—To five c. c. of urine in a test tube, add several drops of a freshly-made strong solution of sodium nitro-prusside and a few drops of sodium hydrate. A red color appears in the urine and soon changes to a yellow. Holding the tube slanting, a few drops of strong acetic acid are allowed to trickle down the side so as to form a separate layer. A change of color, from yellow to

Zinc Sulphate as a Test for Uric Acid.

Ganassini found zinc sulphate to be a very sensitive test for uric acid, and by using it the well-known murexide reaction may be dispensed with. If an aqueous solution of zinc sulphate be added to a solution of uric acid, or of an alkaline urate, a white, basic urate of zinc separates out. On exposure to air it is said to assume gradually a greenish or blue color. This reaction is not affected by the presence of albumins; hence it may be used for the detection of uric acid in blood.—*Critic and Guide.*

Rivalta's Reaction for Pus.

The test is performed as follows: A drop of the fluid to be investigated is allowed to fall into 50 c.cm. of distilled water to which one drop of dilute acetic acid has been added. If the fluid contains pus, a cloudy precipitate, which the authors compare to the smoke of a cigarette, forms; in the absence of pus, the fluid remains clear. The test is especially useful in distinguishing exudates from transudates and in determining whether the albumin in urine is due to pus or not. A pyuria, even of slight grade, will give a positive reaction, while a purely nephritic albuminuria will fail to do so.

The nature of the reaction is not quite clear, but in all probability it is due to the alkali-albuminate and perhaps the nucleo-albumins present in pus.—*Gaz. des Hôp.*

starting point, usually on the periphery of the patch; (2) all inflammatory processes other than erysipelas stop short of the ear; (3) exquisite tenderness when direct pressure is exerted upon the erysipelatous spot.—*Millian.*

EARLY DIAGNOSIS OF URETHRAL STRICTURE

1. Text-book symptoms of stricture are misleading and do not occur until contraction has existed for years.
2. Symptoms or no symptoms, shreds in a clear or semi-clear urine indicate urethral contraction.
3. The early discovery (three or four months from time of infection) of these shreds may be followed by the entire obliteration of their cause.

—*J. H. Dowd.*

SCARLATINA VS. ROTHELN

In scarlatina there is initial vomiting, chills, headache and sore throat, sometimes going on to ulceration; no early enlargement of the post-cervical glands. In German measles there is no vomiting, no prodromal stage, the rash being often the first symptom and always appearing on the face; little or no constitutional symptoms; no ulceration of the throat; a very characteristic early enlargement of the post-cervical glands.—*Lindsay.*

MEASLES

Take a flannel blanket, wring it out of water as hot as the hand can bear, and wrap the patient up in this with a cold cloth on the head. Keep him in pack about twelve or fifteen minutes, then transfer to a dry blanket and allow him to cool gradually; this brings the eruption to the surface carmine red, at the line of junction, indicates acetone, On standing, a blue-green color is developed.

TO PRESERVE URINE

About six or eight drops of chloroform are added to each fluid ounce, and the mixture well shaken. The excess of chloroform soon collects at the bottom of the bottle. Samples so treated will keep for months, even in the hottest weather. Chloroform promptly reduces Fehling's solution. If therefore it be desired to test for sugar, the chloroform must be removed by boiling the fluid; or, better, the bismuth or phenylhydrazin test must be used. Chloroform does not interfere with these nor simulate sugar.

—*Leffman.*

CAR SICKNESS

When a person who contemplates a journey details a history of car sickness, I advise a dose of calomel at night and Epsom salts before breakfast the day of starting, since during the journey and often for a day or two after the trip the bowels are constipated. Light, digestible food is allowed. In an emergency case my usual treatment is to lay the patient down in as comfortable position as possible, apply a bandage to the eyes with cold water, and give a tablet consisting of acetanilid, grs. iii ss; sodium bromide, gr. 1-10; sodium bocarbonate, gr. i; citrate of caffeine, gr. ss; and, if the heart's action seems weak, trinitrin, gr. 1-100.—*W. M. Bemus.*

ERYSIPELAS

Three objective clinical signs are pathognomic erysipelas: (1) The pronounced lesions are al- situated at a spot some distance from the

and relieves the mucous and serous membranes. If necessary, give antipyretics for fever and relieve cough. I have never had any complications with this treatment.—*Merriman.*

A TEST FOR BLOOD

A test for blood, applicable to stomach contents, feces and urine: Paper sensitized by benzidine is immersed in the solution to be examined, and a few drops of hydrogen peroxide added, when blue or green color appears in a few seconds, if blood is present. We should not wait more than a minute for this reaction, as after that time the color may be due to the presence of other substances than blood. HCL may cause the reaction after two or three minutes.—*Max Einhorn.*

TEST TO DETECT TAINTED MEAT

The official inspectors in Dresden, Germany, make use of Eber's reagent; a mixture of hydrochloric acid, one part; alcohol, three parts; and ether, one part. With this a glass rod is moistened and held close to the suspected meat. If the polished surface becomes clouded (owing to the formation of ammonia), the meat is declared unfit for food and consigned to the fertilizer factory.

FOR HEMOPHILIA

To lessen the tendency to bleeding, large quantities of the white of eggs—four to six—three times a day. To prevent excessive operative hemorrhage in cholemic cases, Mayo Robson advises dram doses of calcium chloride given three times a day in plenty of water.—*Ochsner.*

VERATRUM VIRIDE

After eighteen years of clinical experience with the drug, under a constantly widening variety of pathological conditions, Dr. J. H. Landis has come to regard veratrum as the most valuable single therapeutic resource at our command. Its value lies in its power as an eliminant, and when we consider that elimination in strictly medical cases is of the same enormous importance as drainage is to surgery, it cannot be overestimated. The value of veratrum further lies in its power to overcome sthenic states and thereby actually abort or modify in a favorable way acute inflammatory conditions, and in its power as an antispasmodic. Possibly the drug increases the normal resistance to inflammations or act as an antidote to toxins. Possibly it works through the vasomotors, restoring the normal condition in inflammatory areas in which the vasomotor control had been lost. In these conditions of acute inflammation with high fever, full, rapid pulse, and impending or actual delirium, its action is little less than magical. Under the influence of a ten-drop dose of the tincture at half-hourly or hourly intervals, the whole picture is changed in a few hours. The pounding heart becomes almost or quite normal, the pulse soft and compressible, the skin moist, the fever subsides, the mental disquiet gives way to a state of calm, and the condition is changed from one of imminent danger to one of comparative safety.

CREOSOTE IN TUBERCULOSIS

R. W. Phillip says that the prolonged use of creosote has led him to the conclusion that creosote exerts a beneficial, and even curative, effect in the

Treatment of Cardiac Failure.

reat benefit results in a large number of cases of cardiac
ure from using a hot fomentation over the liver and ab-
nen, with a cold compress over the heart, followed by
l friction to the skin of the entire body. This procedure,
ays, tends to diminish the congestion of the liver, which
s accompanies a failing circulation; dilates the capil-
of the skin, and almost invariably gives some relief, at
the first and second stages of broken compensation.—
on; Journ. Mich. State Med. Soc.

more chronic forms of pulmonary tuberculosis. Cough and expectoration are often reduced remarkably, secretion being lessened and thereby the need for cough removed. The gastro-intestinal tract also benefits, while the appetite improves and the complicating diarrhea is frequently relieved.

In the author's experience disturbing effects are not observed when pure beechwood creosote has been used; and still more rarely does renal trouble ensue, although "an eye must be kept on the urine, nevertheless."

OBESITY REGIMEN

1. A morning laxative saline.
2. At meals quassin and sodium arsenate.
3. At bedtime strychnine arsenate, digitalin and aconitine.
4. Mixed diet, animal and vegetable.
5. Active exercise.
6. Hydrotherapy.—*Burggraeve.*

DISEASES OF THE HEART THAT CAUSE SUDDEN DEATH

There are certain forms of disease of the heart that undoubtedly cause sudden death, while other forms, though fatal from the first, give rise to complications which produce death indirectly rather than directly through the heart itself.

(1) *Aortic regurgitation.*—It is claimed by some that, owing to the enormous enlargement of the left ventricle, which sometimes occurs in this disease, the coronary arteries are so pressed upon that blood cannot enter them, and the heart fails from want of blood supply. Or death may occur from cerebral apoplexy, due to the force with which the blood is

driven from the left ventricle, owing to the existing dilated hypertrophy of that part of the heart.

(2) *Angina pectoris.*—In this disease the patient may die suddenly, from paralysis of the heart, from failure of the coronary circulation, due to cardiac arteriosclerosis, and shock from the terrific pain.

(3) *Fatty degeneration.*—This may lead to sudden death from failure of the heart to act, or from rupture.

(4) *Extreme dilatation.*—The heart may fail or rupture. Some other complication, such as dropsy, may cause death before such a sudden catastrophe.

(5) *Aneurism of the heart.*—Sudden death is generally due to rupture of the heart.

(6) *Fibrosis of the heart.*—The muscular tissue becomes more and more replaced by the connective tissue, instead of fat, as in fatty degeneration, until finally it fails to act.

BEWARE OF THE FLY

He breeds during the warm months of the year in the filth of the barnyard, in the manure of the stable, in the excrement of the privy, in the decaying garbage at the kitchen door. He feeds on the filth from all these places, on the spit of the consumptive, on the festering wounds of man and beast, on the bodies of dead animals. He carries the filth from everything he touches, and may be covered with millions of death-producing germs. He may carry the dread germs of typhoid fever or the germs of consumption. He flies from the privy to the fresh milk on the cellar floor, from the barnyard to the clean dishes of vegetables on the dining-table, from the spit of the consumptive to the nipple of the baby's bottle, from the garbage can to the lips

of the sleeping child, from the dead body to the fresh fruit.

Keep out the fly!

Screen your doors and windows.

See that no flies enter or leave the privy.

Cover the dishes and keep them covered.

Store the manure where flies cannot reach it, and remove it frequently.

Put your garbage into cans and keep the cans tightly closed.

Prevent the flies from breeding by allowing no dirt or filth to accumulate around the house, the stable, or the yard.

Pour kerosene oil into the drains and kill the eggs of the fly.

Where there is no dirt or filth there will be no flies.

Beware of the fly.

—*Med. Review of Reviews.*

THE SALOON A CURSE

I have lived somewhat more than a half century and have had some experience in that length of time, and every bit of it tends to convince me from year to year, and more and more, that the saloon is of greater injury to the wage-workers of the country than any other thing connected with our lives as citizens and men.

—*J. P. Lennon,* Treas. Amer. Fed. Labor.

A NEW YEARS' RESOLUTION FOR THE MEDICAL PROFESSION

Resolved—That I love my profession and will try to master it; love my enemies and try to overcome them; love all mankind and seek to be loved; love virtue above passion, moderation above excess, health above wealth, and God above all.

Resolved—That I try to be glad of life, because it gives chances to love, work and play; to be satisfied with my possessions, but not content with self until I have made the best of them; to despise nothing worldly except falsehood and meanness; to fear nothing except cowardice; to be governed by my admirations rather than by my disgusts; to covet nothing of my neighbor's except his kindness of heart and gentleness of manners; to think seldom of mine enemies, often of my friends, and each day of Christ Jesus.—*Dr. C. E. Meixsell.*

ANTAGONISM OF DRUGS

Moeller states that, treating a man for insomnia and night sweats, he administered morphine and atropine simultaneously, and secured the action of each without interference by the other—inducing sleep by morphine and stopping the sweats by atropine. This harmonized with experimental observations of Knapsteen of Bonn.

What, then, becomes of the classic assertions concerning the antagonism of drugs? Every day we give together strychnine and hyoscyamine, and even in strangulated hernia secure bowel movements therewith. In gastralgia one generally secures the desired effect only by combining morphine, hyoscyamine and strychnine; and in sea-sickness the terrible cramps are calmed by the same combination. When Burggraeve began to feel the approach of age he commenced strychnine arsenate, aconitine and digitalin, thus equilibriating his physiologic accounts; correcting also a disposition to arthritism and gravel. Very well. But this illustration does not in the least invalidate the principle of single drug therapy; it does prove, however, that under certain conditions certain drugs may support each other—the prescriber selecting their dosage according to changing conditions.

A short time before his death Claud Bernard said to Burggraeve: "Instead of compounding remedies which contain an infinity of most dissimilar ingredients, and which pharmacy seems to have so bizarrely assorted that each patient might find there his special but unknown remedy, you employ pure principles, exactly dosed and having an action perfectly known. We know not only what is this action, but we have the power to decide on what anatomic elements it is exerted, thanks to experimental physiology, which even in opium has made known to us the existence of alkaloids with action diverse and even opposed. It is thus one practises scientific medicine." But people say, why not employ the medicaments "as nature gives them to us?" Using the same process of reasoning, why go to the trouble of extracting

metals from their ores? Isn't it about as reasonable to coin our quartz into silver dollars or build bridges with the red dirt of the northern Wisconsin mines?

—*Journal of Clinical Medicine.*

HOW AND WHEN TO GIVE ARSENIC

Arsenic is a remedy that is often misused. It is frequently prescribed for various cutaneous affections, especially the dry, scaly forms; yet when the body has been saturated with arsenic to a certain degree its presence is shown by just such an eruption, possibly with loss of hair and beard, and yellowish cutaneous discolorations due to combination of the metal with albuminoid substances.

So also when arsenic is employed to combat palustral fevers; if the doses are too large it occasions a febrile movement that can only with difficulty be distinguished from that of the malarial disease, especially as it assumes the periodic type. Nevertheless arsenic here also is too valuable a medicament to be laid aside.

In neuralgias and other neuroses good results are obtained from strychnine arsenate. In anginose and suffocative conditions this should be combined with hyoscyamine for the spasmodic element and with morphine for the pain. So taught Burggraeve, unaware as yet the pain is so largely spasmodic that the morphine is unnecessary, hyoscyamine being capable alone of giving more relief, without the numerous disadvantages pertaining to morphine. The immense advantage of associating glonoin is also a development of American clinical observation.

For the fever of consumption Burggraeve employed caffeine arsenate to retard the organic combustion, and found many times that even in galloping phthisis the course was arrested, and improvement followed the lowering of temperature and slowing of pulse.

For apyretic or chronic maladies, we have iron arsenate for chloro-anemias, sodium arsenate for scrofulosis, arsenic iodide for the strumous, sulphur iodide for herpetic affections, etc. The use of antimony arsenate for the insomnia of wealthy, lazy gluttons is one of those apt and delicate touches that make active-principle therapy so attractive. In treating gonorrheal infections the addition of a milligram of arsenic sulphide to each dose of calx sulphurata materially enhances the effect.

If there is any remedy that will cause arrest and retrogression of anterioscleroses, it is arsenic iodide. This is, of all preparations of either iodine or arsenic, the quickest to get to work, and probably the safest, as least likely to leave an arsenical deposit in the body. Besides, as both elements irritate the eyelids, we have in this a certain means of recognizing the full-dose action, when it is time to reduce or suspend the remedy. Copper arsenate fills a place of its own in combating gastroduodenal mycosis and fermentation, allaying many forms of gastric irritability, such as that of alcoholics; also linteric diarrheas, as well as milder affections of the digestive tract in children.

In all cases arsenic should be administered in small and frequent doses, sustained until evidences of its action appear, then stopped if the need has passed, or continued in moderate dosage if the malady is chronic.

The effect of arsenic in favoring fatty degeneration explains its value in acute febrile affections, where it acts powerfully in resolving the newly formed products of the disease. In malarias it is now believed that arsenic, joining itself to the red blood-corpuscles through its well-known affinity for hemoglobin, protects these bodies from the attacks of the plasmodia. Arsenic is a safe remedy—toxic effects from it are not possible to the physician who is aware of its action and watches for the known evidences thereof.

—*The American Journal of Clinical Medicine.*

TURPENTINE STUPE

The following method will give good results when counter-irritation is indicated: Dip a piece of soft cloth, flannel preferred, into very hot water and wring it out in a towel until no water drips from it; dip in hot turpentine and wring out, then dip again in hot water and wring out. This latter procedure will remove any excess of the drug. The cloth should be applied while hot. This stupe will seldom blister, but it is wiser to remove it when any feeling of discomfort ensues.

TO REMOVE A TIGHT RING FROM THE FINGER

Take a long thread of silk and put one end under the ring and draw it through several inches, holding it with the thumb in the palm of the hand. Then wind the long end of the silk tightly around the finger down to the nail. Take hold of the short end of the silk, and holding it towards the finger end, unwind it, and the silk pressing against the ring will withdraw it.

ORIGINAL THINKING AND EXACT KNOWLEDGE

If there is in any profession a need for the members of that profession to each think for himself, it is certainly true of the medical profession. There is no condition presenting itself, in which the doctor is justified in tamely following the advice laid down in the books. He must do his own thinking for each particular case.

There are no two conditions that are exactly parallel, and nothing is more simple than to jump at conclusions and force a parallel, and use some preparation for a supposedly similar case. The condition must be exact, and the doctor must think this out, and go into every detail for the purpose of determining that they are so. Eclectic physicians are getting credit for having done some original thinking. If any body of physicians have ever blazed trails along new and unexplored lines, it has certainly been the investigators of our school.

Plain common horse-sense is a very strong factor in the obtaining of practical results in the lines in which our investigators have trod, and this same factor with the inclination to doubt the efficacy of routine methods, and to determine exact conditions, thinking often in an entirely new line is just as essential for the physician today—for the medical student—for the young doctor, as it was for the original investigator.

At the same time it is not wise to discard tried and proven methods, until something better is positively determined.

We must go slow, we must think carefully, we must draw final conclusions, which will stand com-

parison with those previously determined. It is not as necessary to go on adding new knowledge, as it is to determine the precise practical utility of that we now possess.—*Ellingwood's Therapeutist.*

TYPHOID TIPS

Giovanni confirms the diagnostic importance of the yellow tint of the lines and folds in the palms, and soles of the feet, in beginning typhoid fever. He found it one of the earliest signs, and the more pronounced, the severer the typhoid infection proved. In extremely severe cases the yellow discoloration extended up over the sides and back of the fingers and toes. Vomiting early, in enteric fever, especially if frequent, indicates a severe case; it is accompanied by bad headache. Muscular rigidity, in enteric fever, always marks a severe and often a fatal case. Hemorrhage from the bowels in enteric fever, if it occurs not later than the second week, may be disregarded; after that time it is a serious symptom. Late and copious hemorrhages are a frequent precursor of perforation.—*Gee.*

Enteric fever seldom begins with a rigor; pneumonia often does. In the former disease the temperature rises slowly, in the latter it rises rapidly. The febrile onset of secondary syphilis may be mistaken for enteric fever, and an incipient syphilide may be indistinguishable, for a few days, from typhoid spots.

Typhoid fever, marked by incessant raving delirium, is hardly to be distinguished from meningitis, especially when the typhoid delirium sets in unusually early, during the first week of the disease, and before the eruption appears. In some of these cases the eruption never develops. A negative Widal test may be expected early in the disease

—*Gee.*

A PLEA FOR SPECIFIC STATEMENTS

Why is it that so many contributors to medical journals will persistently express themselves in a very uncertain manner upon matters relative to the specific uses of medicines in disease? There certainly is a constant inclination on the part of some writers to be as indefinite as they can well be; their thoughts are vacillating and their expressions vague; their intent is practically undiscoverable, and one is skeptical about the sincerity and correctness of their phrases—all because their communications are worded with too much uncertainty are practically devoid of any accuracy and precision.

Such methods are to be deplored, for they can never accomplish anything good fot the therapeutic cause, simply because they lack the very principle upon which definite results depend. Positiveness, definiteness and accuracy in diagnosis are the very *sine qua non* of direct and progressive medication; the sharper the definition is of the former, the more effective, appreciable and thorough will be the latter.

It does seem that no more difficulty should be experienced in giving exact data, than is experienced in issuing an inaccurately written topic; in fact not so much, for the simple reason that in the former instance ordinary intelligence and simplicity only are required, would be manifested and the subject made clear; and for the additional reason that it is easier to do the right thing at the right time, than it is to do the wrong thing all the time; whilst by

the latter method, abstruseness and unfamiliarity are made patent and these practically prohibit any pleasant and profitable participation; any reader may have or is intended that he should have, in the written communication.

What the progressive physician needs and wants is more practical articles on medical topics, and fewer of the kind which have "nothing to them." If the subject is intended to be an exact definition of a condition of disease, which condition in turn has been relieved or mitigated by a specified remedy, or by a consistent, compatible and intelligently prepared pharmaceutical or chemical compound, it is easier and certainly more satisfactory generally to tell it briefly and plainly and in unvarnished language, than to hide the intent and make obscure the meaning, by any manner of juggling or mystifying expressions, or to attempt to cover an individuality with a cloak of generality.

Here comes along a writer in Smith's Journal and says that "in fevers of childhood he always gives a combination of equal parts of boneset, sweet spirits of nitre and aromatic spirits of ammonia." We can assume from this that he means that if he is called to treat children who have fever he always gives them boneset, sweet spirits of nitre and aromatic spirits of ammonia, but he does not say whether the dose of his medicine is a teaspoonful or how much, nor whether the boneset is used in the form of the powder, extract, infusion or tincture. He has his formula for fever and that is all there is to it, and this kind of literature is forced upon reading fraternity.

Would it not be far better to briefly and concisely describe the pathological condition which was relieved with a specified remedy or remedies or if the real pathology of the case is obscure, state accurately and in exact language what the pathological expressions were and the probable import of the various symptom features; and if even this is impossible, state what symptom or group of symptoms, as they were manifested, were abated by the administration of any particular medicine, adding a few words concerning the dose and the frequency of its administration. Getting down to "rock-bottom" facts is what puts us in position to prove our worth to the poor devils who call upon us to relieve and cure them of their ailments.—*J. S. Niederkorn, M. D.*

TREATMENT OF BRONCHIAL ASTHMA

The drug treatment recommended by Dr. J. P. Oliver, is as follows: First, treatment during paroxysm is directed to the immediate relief of the patient. To accomplish this as speedily as possible, if the patient is an adult, he administers hypodermically morphine sulphate, 1-8 to 1-4 grain, and atropine sulphate, 1-150 to 1-100 grain, repeated if necessary in two or three hours. Sometimes, if the patient is neurasthenic, he uses hypodermically from 1-20 to 1-10 of a grain of apomorphine hydrochloride, and in addition 1-60 to 1-40 strychnine nitrate to prevent excessive depression from the effects of the apomorphine.

For constitutional treatment during the intervals the following is used: Potassium iodide, from 2 to 6 drams; corrosive mercuric chloride, 1 to 2 grains; 10 grains of ammonium chloride to dissolve the mercury; Fowler's solution, 1 to 2 drams; distilled water, 3 ounces. From teaspoonful to a

Manly's Mixture

For Asthmatic Dyspnoea.

℞ Spts. Aeth. Co.,
Spts. Ammon. Arom.
āā ℥ij.

M.S. ʒj every hour until relieved. Take in 2 ounces of water.

[Ther. Record, Jan. 1914, P.52]

dessertspoonful, three or four times a day, beginning with the minimum and increasing to the maximum, is to be given.

THE IRON IN RUMEX

Babouriech and Sagent have been experimenting upon the root of rumex and find that it contains nearly one-half per cent of iron, in a proportion greatly in excess of that found in any other plant. Further experiment shows that the iron is present in organic combination.

It is difficult to isolate and identify such complex substances, but evidence was obtained that the compound is analogous to the ferric derivatives of the neucleones; these are shown by Siegfried, are present in milk and in the muscles and other tissues of the body. It is thought that iron, lime and phosphoric acid are carried from one part of the body to another in the form of nucleone derivatives. Many believe that a large proportion of iron administered in inorganic form is not assimilated in the body, and on this account various organic compounds have been introduced into medicine, including the glycerophosphates and so-called succinate of iron. The administration of iron as a nucleone derivative as present in rumex, would appear to offer advantages over other compounds, and this view is supported by results following the administration of rumex by the mouth.

PRUSSIC ACID POISONING

A child had eaten freely of roasted bitter almonds. She was pale, temperature subnormal; pupils dilated; insensible and fixed; sight and mind obscured, breathing difficult, heart palpitating, pulse small, tongue dry and saburral, much foam in the mouth. An emetic was not helpful, clonic convulsions came on, the pupils contracted, the child became insensible; trismus, vomiting, urine and feces discharged involuntarily. The hair was cut and mercurial ointment rubbed into the scalp, an enema of coffee given, sinapism applied with cold to the head. Patient grew worse. After leeches to the mastoid the convulsions ceased, the coma increasing. In this desperate crisis strychnine arsenate was given, and at once an improvement was manifested, recovery ensued.—*American Journal of Clinical Medicine.*

RESTORATION FROM ANESTHESIA

Immediately recovery from anesthesia is desired in a person who has been anesthetized for surgical or other purposes, wring a towel out of cold water and apply it directly over the stomach and bowels. This has the effect of producing complete sensibility almost instantly, and I have found when so restored these patients are not so apt to suffer from nausea, vomiting, nervousness, or in fact from sequelæ of any kind. Those who try this method once never leave their patients to come out from under the effects of the anesthetic of their own accord.—*Burd.*

Dr. Ellingwood advises removing the cold cloth as soon as consciousness is restored, and using hot applications to the surfaces and extremities in proportion to the reduction of temperature, which is much greater after ether than chloroform.

THE CORNEAL REFLEX

To touch the cornea repeatedly with the finger during anesthesia for the purpose of obtaining the

corneal reflex is a bad habit. The reflex can be tested just as satisfactorily by shifting the eyelid gently across its surface.

A point worth remembering is that in the morphine-anesthol (or morphine-chloroform) anesthesia, the corneal reflex may remain quite active, while with ether it soon becomes feeble or extinct.

THE TEMPERATURE IN ANESTHESIA

Surgeons as a rule are very careless, in many cases criminally careless, concerning the temperature of patients exposed for an operation. The anesthesia in every case reduces the temperature; the exposure reduces the temperature; so does also the shock, and all these influences are increased by applying wet applications around the seat of operation. The reduction from ether alone is very great, and that from chloroform is only second to it.

The patient should be kept covered, warm applications should be made instead of cold, and the time will come when the anesthetic will be given with warm air. If the temperature is sustained, there is much less shock, less danger of other kinds, and much more rapid restoration.

—*Ellingwood.*

THE PULSE DURING ANESTHESIA

There are some advantages in choosing the temporal pulse as the guide, instead of the radial pulse, which is ordinarily followed; occasionally the temporal can still be fel twhen the radial has become impalpable. The pulsation of the temporal artery is best felt by placing the index finger flat over the tragus into the depression at the root of the ear. The pulse is important, because it tells how the heart reacts to the anesthetic and the surgeon's manipulations. The frequency is not very important. Exceptionally it may be 120 or 130 during the greater part of an anesthesia without vital significance, if the quality is good.

A diffuse and weakening pulse is a signal that the narcosis is too profound and that the heart is in danger of collapse. A somewhat irregular pulse may immediately precede or accompany the act of vomiting, and is not a cause for alarm.

Slight pallor, developing during the course of the narcosis, should always be regarded as a danger sign. It means that the patient is in profound anesthesia, and that the heart is threatening collapse. The mask should be removed promptly and the patient allowed to breathe pure air. As long as the pulse is not weak or irregular one need not worry about the outcome.—*Neef.*

THE PUPIL DURING ANESTHESIA

In patients who have not received morphine before narcosis the pupil is, as a rule, a guide of some importance. If the pupil is narrow, examination of its reaction to light is generally superfluous. A wide pupil which reacts promptly to light indicates superficial anesthesia; the patient may need more of the anesthetic. A wide pupil which reacts to light sluggishly, or not at all, means that the danger line has been over-stepped.—*Neef.*

DANGER SIGNALS IN ADMINISTERING ETHER

The most alarming danger signals are sudden pallor of the face, dilatation of the pupils and darken-

Medicolegal Aspects of Anesthesia.

Dr. F. Hoeffer McMechan, Cincinnati, Ohio, in *Annals of Surgery*, Dec., 1913, concluding an admirable paper, says:

Each and every patient should be especially examined before being put under the influence of any anesthetic.

Inhalation anesthesia should be limited to cases in which it is necessary; in other cases local or regional analgesia is the method of choice.

Under no conditions should the same physician both anesthetize and operate.

Only qualified medical men should be allowed to anesthetize a patient.

Students should anesthetize only under proper supervision.

Chemical purity and non-deterioration of agents used should be assured.

These conclusions are based upon the regulations of the Vienna Board of Health.

To this is added the following points: Consent is necessary before anesthesia. The anesthetist must protest if the surgeon proceeds further in operating than was consented, so as to relieve the anesthetist of legal responsibility. In the employment of new and untried anesthetic agents, the anesthetist assumes added legal responsibility. Medical practice acts should abolish the administration of anesthetics by nurses. Anesthetists must exercise every ante-and post-operative precaution. Women should not be anesthetized without proper witnesses for the surgeon and anesthetist being present. Records should be kept of all anesthesias. Anesthetists administering an anesthetic for the purpose of another doing an illegal operation are equally responsible with the operator.

ing of the blood. When these symptoms present themselves, the anesthetic should at once be withdrawn, and resuscitating measures instituted.

—*Hearn.*

ETHER FROM THE ORIGINAL CAN

The tin covering the neck is carefully cut around two-thirds of the way and turned back, so as not to break. A thick wick of absorbent cotton is placed in the angle between the neck and the flap, so that it is held in place while the flap is folded down. By tilting the can the ether may be made to flow along this wick in drops. The advantages are availability, simplicity and cleanliness.

—*J. E. Lumbard.*

A SUGGESTION FOR ANESTHETIST

Everybody who has had experience in the administration of cholroform or ether to young subjects has had trouble in getting them started without a scene, which, in private practice, is very trying to all concerned. I have been in the habit, for the past two years, of having a little eau de cologne or other perfume dropped in the inhaler to begin with, then after a few minutes, chloroform is added. This procedure has the effect of lessening the child's initial terrors, and saves wear and tear both to the operator and to the anxious parents.

—*G. S. Ryerson, M. D.*

LESIONS DUE TO THE PNEUMOCOCCUS

Meningitis, ulcerative endocarditis, suppurative pericarditis, pleurisy, otitis media, arthritis, peritonitis, localized abscess, conjunctivitis, osteomyelitis, periostitis, necrosis, thyreoditis, parotiditis, tonsilitis, gastritis, nephritis, perinephritis, endocervicitis.—*Eyre.*

CAUSE OF THE DISORDERS OF PREGNANCY

A recent observer (Diesing), who has practiced medicine for many years in the Orient and in Africa, where the women do not eat meat, claims that in his entire experience he never witnessed a single case of complicated pregnancy. The gastric disturbances, the intestinal disorders, the nervous and other complications observed among all civilized people, he says, were entirely absent. He claims that meat, especially the albuminous products of meat, supplies a very large excess of sulphur which is subject to various decompositions which cause many disturbances, as it predominates in the blood. At the same time the mother does not obtain from the meat food sufficient iron to supply the demand, and the necessity causes the essential iron of her system to be used up. He believes the diet has more to do with the disorders of pregnancy than anything else.

FOMENTATIONS

for local pains are always preferable to liniments, lotions, or poultices. Apply by wringing cloths out of hot water and placing to the part to be treated in a fold or two of dry flannel. If boiling water is not to be had, wring the cloths from cold water, place into folds of newspaper and heat on top of stove or against the stove pipe.

A SURGICAL HINT

After the introduction of the Murphy button no sutures should be applied over the button.

—*Ohio State Med. Jour.*

TO MAKE COD LIVER OIL PALATABLE

Try taking cod liver oil in tomato catsup if you want to make it palatable.

OPHTHALMIC TIPS

The indication for local ophthalmic use of silver nitrate is the discharge, more or less profuse, of a mucous or mucopurulent character, the mucous membrane having a soft, soggy appearance. The necessity may be emphasized of not relying, in purulent inflammation, upon such remedies as argyrol and protargol. No matter in what solution used, they do not take the place of the old reliable nitrate. They have, however, a useful place, especially argyrol, in catarrhal inflammation, and in purulent inflammation for frequent home use between the treatments given by the oculist.

—*Eye, Ear and Throat Journal.*

Clipping the lashes close, before ophthalmic operations, renders the first dressing easy, as the lids are not glued together, there is no retention of secretion, and, accordingly, there is less danger of secondary infection. Avoid bichloride solutions in eye work as much as possible. After cocaine has been used they may cause a permanent opacity of the cornea.—*Oklahoma Med. News Jour.*

Typhoid fever in old people has a tendency to induce cataract, most probably by reason of a reduced nutrition during the continuance of the fever. In treating any form of conjunctivitis do not neglect general medication. Open the emunctories, clean out generally; this often means success. All forms of Bright's disease are liable to eye complications; look for albuminuric retinitis in these cases.

—*Med. Summary.*

TO OBTAIN INFANTILE SPUTUM

Excite a cough by irritating the pharynx, and then catch the sputum brought up into view upon a bit of gauze or muslin. The cough may be excited by a spoon or a tongue depressor, or better by a small bit of muslin in the jaws of an artery clamp. Upon this the secretion is easily secured when it is brought into view by the cough.—*Holt.*

RESUSCITATION OF THE STILL-BORN

Rhythmical traction of the tongue has been highly lauded as a substitute for artificial respiration in attempting the resuscitation of apparently still-born infants, but this procedure, though of unquestionable utility, has the drawback of being somewhat difficult of application in these cases on account of the difficulty of obtaining and retaining a firm grip on the little tongue. As an alternative, it is pointed out that rhythmical pressure on the base of the tongue by the finger introduced through the mouth answers the same purpose, and at the same time it has the advantage of freeing the upper air passages from any accidental cause of obstruction.

—*Med. Press and Circular.*

Treatment of Hydrocele.

A writer in *The Critic and Guide* says: Take ¼ grain protoiodide of mercury (green or yellow iodide of mercury) once a day for four or five weeks and you will find the water in the sac will be gone, never to return, and the parts resume their natural shape.

DUODENAL ULCER AND GALLSTONES

The cardinal symptoms are similar in both conditions, pain in right upper quadrant, vomiting and gas. In ulcer the pain is less sudden and severe, burning or gnawing rather than boring or lancinating, and relieved by food or eructation. The vomiting with gallstones is more persistent and less in quantity, and does not afford relief to the pain.—*Haines.*

DIAGNOSIS OF HIP DISEASE

Lovett says that it is obvious that the signs ordinarily taken to be diagnostic of tubercular hip disease are not characteristic of it, but are also present in cases which rapidly recover and in other forms of chronic joint inflammation than tuberculosis. It is therefore necessary that some diagnostic criterion must be sought, more accurate than the presence of one or all of the signs. Of all the signs given, "thickening of the trocanter" proved to be the most reliable. He also states that the X-ray is of great value in early diagnosis.

INDICATIONS FOR LAVAGE

(1) To remove undigested food and foreign matters; (2) to cleanse the mucous membrane for the action of medicines; (3) to check hemorrhage; (4) to give antiseptic douching; (5) for sedative purposes; (6) for general tonic effects upon the gastric mucous membrane and parietes.

—*J. M. G. Carter.*

FOREARM FRACTURE

The position treatment for fractures of the forearm is important. For fractures above the insertion of the pronator radii teres, the forearm should be dressed in complete supination; in a position midway between pronation and supination from fractures at the middle of the forearm, and in complete pronation for breaks at the lower end of either the radius or ulna.—*Fletcher.*

GASTRIC ULCER

There is one class of gastric ulcer which is not amenable to surgical treatment. These are the actively bleeding ones. It is my experience, and that of other surgeons, that these should be treated medically altogether, as surgical interference almost invariably leads to a fatal issue. I do not include here the slowly bleeding or oozing ulcers, or those in which hemorrhage has occurred at some time previously, but only those which are actively bleeding or have done so within a short time before the surgeon sees them.—*J. B. Deaver.*

GONORRHEAL RHEUMATISM

Put to bed only if lower extremtiies are attacked; immobilize joints, and apply compresses wet in cold lead and opium wash. When the acute symptoms subside apply the paquelin cautery, or rub in compound iodine ointment, and make firm and uniform pressure by a bandage. If then the fluid remains it may be withdrawn and the joint irrigated with mercuric bichloride, 1-5000. In the chronic stage the joints are massaged and exercised daily, and large doses of potassium iodide administered. The most important thing of all, however, in gonorrheal rheumatism is to cure the urethral lesion.

—*Hayden.*

Drugless Cure for Rheumatism.

It is not the state of the weather that causes
matism, but the waste matter in the flesh, whi
disturbed by atmospheric changes. Consider me
that starchy foods which are not well cooked an
masticated, and artificial sweets, such as sugar, a
syrup, ferment in the bowels and cause gases u
are poisonous to mind and body, and it will be
apparent that the diet must be corrected in order
the mental forces of the body may express perfect i

To cure rheumatism, discard all soggy pastries,
not use drugs or stimulants or mineral waters. D
a greater lung capacity for the absorption of the vit
cleansing elements in pure air. (Get more oxygen.)
tract and relax all the muscles in the body daily to s
out the accumulated impurities. Contemplate the ete
presence of life, and educate the mind to a serene an
philosophical attitude, so that there will be no petty
ring feelings to generate psychic poisons in the bloo
irritate nerves. Keep the pores active and the skin
lation vigorous by friction, sun baths, cool air and cool

[The San Francisco and Pacific Druggist, Dec. 1911.]

VENESECTION

Venesection, declares Doland, has fallen into unjustified disuse. It is especially indicated in cases of valvular disease with right-sided dilatation; in well-marked myocardial degeneration it is useless. It may relieve pain in cases of aneurism of the arch of the aorta; in croupous pneumonia it is often of great value when the right heart is dilated. A weak radial pulse does not contraindicate venesection; it is on the contrary a good indication for its practice.

MORRISISMS

For the last forty years we have tried so conscientiously and scientifically to help the patient by following up his bacteria, that we ran past the patient himself altogether.

If we broadened our biological studies so as to include the relation to man of what comes out of his mouth as well as what goes into his stomach, we would use only predigested speech.—*Morris.*

THE FOOD FACTOR IN DIABETES

Feeding in diabetes permits of a good deal of latitude as to the choice of foods. The strict non-carbohydrate diet is not called for and often amounts to starvation for the patient. Man cannot live without carbohydrates for long, without using up his tissues, and we have virtual starvation. Carbohydrates pushed relieve the symptoms of diabetic coma. Fats are generators of heat, energy and force, and their nutritive value is about twice that of carbohydrates and proteids. They are especially indicated in serious cases of diabetes.

—*H. S. Stark.*

AQUA CINNAMON IN DIABETES MELLITUS

Having this disease from my parents, and having had the same in active form for about eighteen years, I feel like speaking right out in meeting. I have tried about all the remedies advertised for this disease, with good and bad results, even prussic acid. This medicine will stop the disease, but it may send the patient to Davie Jones' locker. I just escaped the said place.

During the hot weather in July, I drank too much cold water, and had cramps in my stomach for a few days. Different remedies were tried with varying success. One day I took one ounce of cinnamon water, sweetened with saccharin; this relieved me at once. To make a long story short, I have found the remedy for my diabetes. My sight has improved, also hearing. I have gained strength, sleep well, and feel tip top.

There is now no sugar in my urine. I eat a few forbidden articles, now and then, without any trouble, not too much at a time. I am nearly fifty-eight years old, but to think that cinnamon water, a remedy so simple, has done what nothing else can do, is most astounding, but we old diabetics have pains that the world knows nothing about. Try it, doctor.

—*Dr. O. Houts.*

DIABETES

The treatment of glycosuria should comprise, says Burggraeve:

1. Strychnine to incite the nervous system.
2. Cicutine and camphor monobromide as antigenesics.

following receipt is recommended by O'Donnell as a substitute home-made bread. It contains no starch or sugar, and will help give variety to the diet: Beat six eggs thoroughly; add a teaspoon of baking powder and a quarter as much of salt; again beat the eg Pour the mixture into hot waffle irons smeared with butter. Ba in a hot oven. Eat hot with butter or flavor with cheese or nuts

Substitutes for home-made wheat bread should be used only wh patients are upon a strict diet.

The following vegetables may be eaten by diabetics: cress, ca bage, lettuce, sprouts, endives, broccoli, spinach, chicory, cucu ber, mushrooms, artichokes, green French beans,[1] sauer-kraut, cau flower, dandelion, sorrel, asparagus, onions, leeks, tomatoes.

The following table shows the relative percentage of the imp tant constituents of the commonest vegetables:

	PROTEID.	FAT.	CARBOHYDRATE.
Lettuce,	1.4	0.3	2.2
Sprouts,	4.8	0.5	6.2
Cabbage,	1.9	0.2	4.9
Spinach,	3.0	0.5	3.5
Cucumber,	1.0	0.1	2.3
Mushrooms,	3.6	0.3	6.8
String-beans,[2]	2.7	0.1	6.6
Cauliflower,	0.5	0.3	4.5
Asparagus,	1.8	0.2	2.6
Onions,	2.7	6.3	6.5
Tomatoes,	1.2	0.3	4.1
Jerusalem artichokes,[3]	2.0	0.1	15.2
Radishes,	1.2	0.1	3.8
Celery,	4.6	0.8	10.0
Parsley,	3.7	0.7	7.4
Carrot,	1.0	0.2	9.4
Turnip,	2.1	0.1	11.7
Potato,	1.8	0.2	20.6
Sweet potato,	1.3	0.3	23.0
Beans (dried),	24.3	1.6	49.0
Peas (dried),	22.8	1.8	52.4

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[1] Kleen says that string-beans contain several per cent. of sugar and starch when seeds are developed; they should be eaten when green. Sauer-kraut, when well mented, contains only a trace of sugar. Celery contains 10 per cent. of sugar, and must forbidden when diabetics are on a strict diet; some clinicians permit it at other times

[2] When green the percentage of carbohydrate is much less.

[3] Inulin, levulose, and gum compose the carbohydrates in Jerusalem artich *They are therefore* an appropriate food in diabetes.

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Having this disease from my parents, and having had the same in active form for about eighteen years, I feel like speaking right out in meeting. I have tried about all the remedies advertised for this disease, with good and bad results, even prussic acid. This medicine will stop the disease, but it may send the patient to Davie Jones' locker. I just escaped the said place.

During the hot weather in July, I drank too much cold water, and had cramps in my stomach for a few days. Different remedies were tried with varying success. One day I took one ounce of cinnamon water, sweetened with saccharin; this relieved me at once. To make a long story short, I have found the remedy for my diabetes. My sight has improved, also hearing. I have gained strength, sleep well, and feel tip top.

There is now no sugar in my urine. I eat a few forbidden articles, now and then, without any trouble, not too much at a time. I am nearly fifty-eight years old, but to think that cinnamon water, a remedy so simple, has done what nothing else can do, is most astounding, but we old diabetics have pains that the world knows nothing about. Try it, doctor.

—*Dr. O. Houts.*

DIABETES

The treatment of glycosuria should comprise, says Burggraeve:

1. Strychnine to incite the nervous system.
2. Cicutine and camphor monobromide as antigenesics.

following receipt is recommended by O'Donnell as a substitute home-made bread. It contains no starch or sugar, and will help give variety to the diet: Beat six eggs thoroughly; add a teaspoon of baking powder and a quarter as much of salt; again beat the eg Pour the mixture into hot waffle irons smeared with butter. B in a hot oven. Eat hot with butter or flavor with cheese or nuts

Substitutes for home-made wheat bread should be used only w patients are upon a strict diet.

The following vegetables may be eaten by diabetics: cress, c bage, lettuce, sprouts, endives, broccoli, spinach, chicory, cucu ber, mushrooms, artichokes, green French beans,[1] sauer-kraut, ca flower, dandelion, sorrel, asparagus, onions, leeks, tomatoes.

The following table shows the relative percentage of the imp tant constituents of the commonest vegetables:

	PROTEID.	FAT.	CARBOHYDRATE.
Lettuce,	1.4	0.3	2.2
Sprouts,	4.8	0.5	6.2
Cabbage,	1.9	0.2	4.9
Spinach,	3.0	0.5	3.5
Cucumber,	1.0	0.1	2.3
Mushrooms,	3.6	0.3	6.8
String-beans,[2]	2.7	0.1	6.6
Cauliflower,	0.5	0.3	4.5
Asparagus,	1.8	0.2	2.6
Onions,	2.7	6.3	6.5
Tomatoes,	1.2	0.3	4.1
Jerusalem artichokes,[3]	2.0	0.1	15.2
Radishes,	1.2	0.1	3.8
Celery,	4.6	0.8	10.0
Parsley,	3.7	0.7	7.4
Carrot,	1.0	0.2	9.4
Turnip,	2.1	0.1	11.7
Potato,	1.8	0.2	20.6
Sweet potato,	1.3	0.3	23.0
Beans (dried),	24.3	1.6	49.0
Peas (dried),	22.8	1.8	52.4

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[1] Kleen says that string-beans contain several per cent. of sugar and starch when seeds are developed; they should be eaten when green. Sauer-kraut, when well mented, contains only a trace of sugar. Celery contains 10 per cent. of sugar, and must forbidden when diabetics are on a strict diet; some clinicians permit it at other times

[2] When green the percentage of carbohydrate is much less.

[3] Inulin, levulose, and gum compose the carbohydrates in Jerusalem artich *They are therefore* an appropriate food in diabetes.

3. Salines to establish the alkalinity of the blood.
4. Quassin and sodium arsenate as digestives.
5. A laxative saline in the morning to refresh the blood serum and calm abnormal thirst.

CARBOHYDRATES IN DIABETES

Tyson says the best method of determining the carbohydrate metabolism of a diabetic, is to place him at first on a pure proteid food, and if such a diet is followed by a disappearance of sugar from the urine, subsequently articles of food containing starch should be slowly added until sugar reappears in the urine, such reappearance beyond 2 per cent being the signal for interrupting further addition of carbohydrates.

CLINICAL SIGNIFICANCE OF GLYCOSURIA IN PREGNANCY

1. A positive reaction with Fehling's solution during pregnancy does not necessarily indicate the existence of diabetes, but is usually due to lactosuria, or to transient, alimentary or recurrent glycosuria.
2. In such cases it is imperative to determine whether the sugar occurs as lactose or glucose, as lactosuria is without clinical significance and is probably associated with premature activity of the breast.
3. The significance of glycosuria is not so clear. If alimentary in character, it may be regarded with impunity. Otherwise, it may be of the transient or recurrent variety, or may indicate the existence of true diabetes.
4. If the glycosuria appears late in pregnancy, does not exceed 2 per cent in amount and is not accompanied by symptoms, it is probably transient

and may disappear spontaneously at any time, or persist until the end of pregnancy. In either event it is usually of slight clinical significance, and merely indicates that the patient should be carefully watched.

5. If the sugar appears early in pregnancy and in large amounts, the condition is more serious, as it may be impossible to make a positive diagnosis until after delivery, when the condition disappears in glycosuria, but persists in diabetic cases.

6. Pregnancy may occur in diabetic women, or diabetes may become manifest during pregnancy. Either is a serious complication, although the prognosis is not so alarming as is frequently stated; many patients do perfectly well, while a smaller proportion die in coma or collapse at the end of pregnancy, or during or shortly after labor.

7. If the output of sugar is large and cannot be controlled, or at least markedly diminished by suitable dietetic and medicinal treatment, the induction of abortion or premature labor is indicated even in the absence of serious symptoms, and much more so when they are present.—*Williams.*

TO PREVENT SOFTENING OF PLASTER CORSETS

To overcome this difficulty Ferdinand Bahr describes a method which makes it possible to wear the corset for a much longer period. His method consists in putting on first a layer of gutta percha, which thus lines the inner surface of the corset, and being impermeable to moisture, keeps the plaster bandage dry and firm.

FOREIGN BODIES IN THE EYE

In untrained hands any sharp instruments for the removal of foreign bodies from the cornea is

[illegible] ℞:
Sat. Sol. Boric Acid, ʒij
Zinc sulpho-carb., grs. ss.
M. S. gtt. i vel gtt. ij in eye
several times daily.

INGROWING NAILS

1. Remove all pressure from the nail by cutting away a piece of the shoe.
2. Disinfect with hydrogen dioxide until no more foam appears.
3. Apply a drop of strong solution of cocaine to the base of the ulcer.
4. Apply a drop of Monsell's solution to the ulcer, then cover loosely with gauze. Repeat this process every second day until the edge of the nail is released by the retraction of the hypertrophied tissue.

—*Kinsman.*

POST-OPERATIVE GAS PAIN

Is often the source of great distress to patients who have undergone the ordeal of laparotomy. It is due to temporary paresis of the gut and the consequent distention with gas. When the trouble is in the lower bowel considerable relief may follow the insertion of the rectal tube. Irrigation of the colon, when permissible, may stimulate peristalsis in the higher segments of the bowel.—*Neef.*

ABORTION OF FELON

A commencing felon will always be aborted by the local application of alcohol under perfect air exclusion. Cotton is saturated with alcohol and placed about the affected part, and a thin rubber finger-stall applied over all. Seventy-two hours usually suffices to give relief and even effect a cure.

SURGICAL SUGGESTIONS

A palpable tumor in the umbilical region is often a malignant growth of the transverse colon. Benign growths of the mesentery are also found here.

If the physical signs of pneumonia persist for an excessively long period, especially in children, it is wise to aspirate on the suspicion of empyemia.
—*Am. Jour. Sur.*

Moderate bloody discharge, after extirpation of the gall-bladder, is most often due to oozing from the raw surfaces of the liver. Sudden, profuse bloody discharge is more dangerous, as it means that the ligature has slipped from the cystic artery.

Not more than two or three drops of a one-per-cent solution of cocaine should be injected into the urethra at one time.

As abscess of the breast has a strong tendency toward recovery, the incision does not need to be much longer than the diameter of the suppurating area.—*Foote.*

A SURGICAL CAUTION

An impacted fracture of the neck of the femur may be broken by severe manipulation, and a patient that would have had a useful limb may be quite completely disabled for life, for an impacted fracture of the neck of the femur is the best setting of the bony fragments that a surgeon can have.
—*Senn.*

A HINT ABOUT SUTURES

Of all methods the uninterrupted suture gives the best results, and each plane should be sutured by itself. An over and over Glover's stitch is not as satisfactory as an in-and-out suture, each stitch being made to enter the tissues exactly opposite to where the last comes out, so that the thread crosses the wound at right angles.—*H. O. Marcy.*

ACUTE INFLAMMATIONS

Magnesium sulphate, as a local application in acute inflammatory conditions, has been strongly recommended by many observers. Tucker has had excellent results from its use in erysipelas. He applies it in the form of a saturated solution on several layers of gauze and states that in thirty-five severe cases all recovered within from five to seven days. The pain and burning are usually relieved in a few hours. Solis-Cohen has also employed local applications of this drug with decided benefit in relieving the pain of articular rheumatism.

—*Hahnemannian Monthly.*

SCALP WOUNDS

Should always be stitched, if of any size. But always remove the stitches very early; otherwise they may act as setons, and lead to suppuration, which if it reaches the loose layer under the aponeurosis, is likely to be serious. These wounds only gape if the scalp muscle or its aponeurosis is incised, and a very few stitches are needed.

CASES REQUIRING PROFOUND ANESTHESIA

1. Trachelorrhaphy, colporrhaphy and perineorrhapy.
2. Stretching of the sphincter and hemorrhoid operations.
3. Resection of the rectum by the perineal or sacral route.
4. Perineal prostatectomy.
5. Inguinal and femoral herniotomy.

—*Neef.*

DIET IN SENILE HEART

1. There must never be less than five hours between each meal.
2. No solid food is ever to be taken between meals.
3. All those with weak hearts should have their principal meal in the middle of the day.
4. All those with weak hearts should have their meals as dry as possible—*Balfour.*

PRACTICAL SUGGESTIONS

Tannic acid is useful for removing the odor of iodoform.

Rectal enemata are frequently expelled because the air which is introduced excites peristalsis.

The belt method of treating whooping cough is of therapeutic value. It controls the vomiting.

—Ohio State Med. Jour.

TO REMOVE RUST FROM INSTRUMENTS

Place them over night in a saturated solution of zinc chloride. On removal the next day they should be rinsed in cold water, placed in a hot soda and soap solution and dried.

—Trained Nurse and Hos. Rev.

PREPARATION OF THE OPERATIVE FIELD

In preparing the field of operation, care should be taken that in the use of the razor the utmost gentleness be exercised to prevent abrasions, which may become the site of infection. For the same reason, cleansing with a stiff brush or vigorous scrubbing should be avoided.

—Inter. Jour. of Surg.

WARM SOLUTIONS OF COCAINE

The local anesthetic effect obtained with cocaine is more rapid, more intense, and more lasting if the solution is warm. The dangers of intoxication are thus much diminished, as the quantity of cocaine can be very much reduced if it is warmed. A solution of 0.5 or 0.4 per cent, heated, will produce a powerful effect.—*Da Costa.*

SOME GENERAL FACTS IN DIAGNOSIS SHOWN BY THE TONGUE

The dryness or moisture of the tongue denotes the extent of the disease of the intestines, and its influence on gastro-intestinal secretion, and will point us in that direction.

A fissured tongue points to the kidneys; either an inflammation, or something is wrong with secretion.

Yellow coatings are usually associated with morbid liver, and a want of biliary secretions, and would indicate mild hepatics and tonics.

Raised papillæ, bright red, denote irritation of the ganglionic nerves, and consequent irritation of the stomach, especially of the mucous coatings. They show, also, exhaustion; no digestion. For this give nux vomica, twenty drops, and the food should be warm, and taken in small quantities. Bismuth and pepsin after the food.

A broad, pallid tongue, with a loaded base, says atony, and excessive acidity, and refers us to a want of action of the entire viscera below. The remedial agents would be alkaline agents and tonics, especially those mild but effectual in character.

A shrunken tongue, pinched in expression, indicates functional inactivity of digestion and requires great care in the choice of foods, as well as in quantity. In this condition of the tongue we have atony also; it is the tongue of advanced fevers, inflammations of the mucous membranes, and want of assimilation, hence great caution must be exercised in both remedies and food. Here we must not use cathartics, Mild aperients may be carefully used.

A concentrated, pointed tongue, with dryness and dark fur, is the usual tongue of typhoid fever, and other low grades of fever, when all thinking minds would use great care in the treatment, and food also.

A broad, thick tongue, the papillæ not visible, but looking raw, denotes a septic condition of the blood, and favors typhoid fever. Indication, if deep red, sulphuric acid; if pale, sulphite of soda.

Deep, dark red tongue and dark coating indicates a septic condition of blood, as well as shades of dark brown and black, which denotes a typhoid or septic condition.

Pale, dirty fur on the tongue denotes acidity, and a septic condition of the system; indicates sulphite of soda; but if the membranes are deep red, sulphuric acid will be admissible, because it would show an alkaline condition of the blood.

A contracted, pointed tongue, with inability to hold it still; the tongue drawn to one side of the mouth, denotes trouble with the nervous system and perhaps with the brain.—*Ellingwood.*

REMEDIES FOR TONGUE INDICATIONS

When the tongue is nearly normal in shape and size but coated with a very thick, clean, white,

moist coat, there is an excess of acidity. Until this excess is neutralized, no real good results can be obtained from other treatment, however correctly it may be indicated. Full doses of sodium bocarbonate, or calcined magnesia will sometimes do more to overcome neuralgia or other acute pains present with this condition, than morphine would do. The syrup of rhei et potass co., is also directly indicated in this case.

A pallid tongue which has been coated, the coat separating in patches, where there is bad breath or tendency to sour eructations with gaseous fermentation, demand the sulphocarbolates, or charcoal, or other good anti-fermentative remedy, such as sodium sulphite, especially if the coat is of a pasty yellow color, or the hyposulphite will be demanded. Where with a white coated tongue there is vertigo with mental dulness or dull headache and nausea, especially if there be some tenderness in the region of the liver, or the skin is yellowish or jaundiced, give leptandra. If the sallowness is only about the mouth and the tongue is coated as above or is somewhat yellowish white, soft, thick and expressionless, give nux vomica.

Where the tongue is coated yellow at the base, or a dirty yellow and pasty, especially if the patient is generally out of tune, with a full, unpleasant feeling in the head and dizziness amounting at times to extreme vertigo with slow action of the liver, constipation, deep-seated, aching pains in the loins, associated with fullness of the veins, give podophyllum or podophyllin.

In cases of glandular disease, the tongue is sometimes puffy, livid, the base in two lobes or very broad and thick across the body of the tongue, phytolacca is indicated. If the tongue of this shape is of a leaden hue, give potassium iodide. It may be given in conjunction with the most closely indicated salt. If there be aching in the loins, give small doses of acetate of potassium.

There are some cases of dyscrasia where the blood is severely impaired or where there are glandular or skin troubles of a chronic character. In these phytolacca and podophyllum may be combined with excellent results with the acetate of potassium, or occasionally with small doses of the iodide of potassium.

When the tongue is lead colored, full or slightly pallid, the so-called lilac-tongue with a pasty fur, give the iodide of sodium or the acetate of potassium. Especially with these symptoms there is a dirty skin, renal inactivity with some aching in the loins. This condition is often present with rheumatism, and sometimes precedes it.—*Ellingwood.*

THE TEASPOON

It should be borne in mind that the ordinary teaspoon holds one and one-fourth and in most cases one and one-third drams of fluid medicine, consequently the term, a dram and teaspoonful, are not the same. To be sure, in giving a teaspoonful dose, it is very rare that a full teaspoonful is given, but occasional cases occur in which the patient gets a rounded teaspoonful, in which case the dose is nearly twice as large as the physician intended. This was the case with a recent patient of mine in which I prescribed one-sixteenth grain of morphine to each dram. He took it in rounded, large

teaspoonful doses, and got one-eighth of a grain at a dose, nearly, and taking the dose frequently got an overdose of the medicine. A four-ounce bottle of fluid medicine will hold twenty-six teaspoonfuls of a watery fluid, and not more than twenty-four of a syrupy or mucilaginous fluid.

—*Ellingwood's Therapeutist.*

STONE IN THE BLADDER

Stone in the bladder causes pain in the head of the penis just back of the meatus; stone in the kidney induces pain in the loin, the thigh, the groin and the testicle; inflammation of the testicle causes pain on the line of the cord in the groin. Pain which is acute at the end of micturition is noted in stone in the bladder, in inflammation of the neck of the bladder, and in inflammation of the prostate gland.—*Da Costa.*

SOME PRACTICAL DON'TS

Don't draw sutures too tight; so-called infection results from strangulated circulation.

Don't try to get a full grown placenta with a curette; use your hand.

Don't irrigate unless indicated by odor; then do it frequently under low pressure.

Don't use dusting powders on clean wounds; plain gauze is enough.

Don't catheterize a female patient under the clothes; see what you are doing.

Don't forget to be clean with your pus cases.

Don't go blind on indications; get at the cause.

Don't forget that para-typhoid is what Scudder called synocal fever.

Don't forget rheumatism is dependent primarily upon gastro-intestinal derangement.

Don't operate if you don't know how.

Don't forget that accuracy in therapeutics depends upon constant study.

Don't weaken a patient with baths.

Don't operate on infections; use wet dressings, and constant irrigation; if pus is inevitable, open and drain.

Don't forget to wash out the bowel for tenesmus.

Don't use poultices; use saturated solution of boracic acid, and keep the dressings wet.

Don't give too much medicine.

Don't be a therapeutic atheist.

Don't make a snap diagnosis.

Don't grope in a belly full of pus; wash out carefully; drain with gauze; your patient may live.

Don't forget that protracted temperature during convalescence may be due to tissue starvation; feed your patient.

Don't dress tibial ulcers too often; put them at rest with adhesive straps and let nature do the rest.

Don' forget to free an infant's prepuce; it may be the cause of much trouble.

Don't give a child with acute or subacute milk infection, milk.—*Dr. Ralph M. Morrel.*

HEART DISEASE

In cases of heart disease we should investigate first the symptoms afforded by the attitude of the patient in bed, by the color of the lips and cheeks, by the pulse, by the jugular veins, or by dropsy, before proceeding to physical examination. Symptoms and

not physical signs, guard our prognosis and treatment.—*Gee.*

TO DETECT FORMALDEHYDE IN MILK

Introduce a little of the suspected milk into a test-tube. Add an equal bulk of water and then allow a little strong sulphuric acid (containing a trace of ferric chloride) to run down the inside of the tube. Allow to stand a few minutes. If formalin be present a beautiful violet ring forms at the junction of the strong sulphuric acid and the dilute milk. In the absence of formalin a greenish yellow tinge is observed. The reaction, if positive, should occur within two minutes.—*Ohio State Jour. of Med.*

CAUSES OF COMA

Meningitis, cerebral abscess and cerebral hemorrhage cannot be differentiated by blood examination. They are alike in being accompanied by leukocytosis. The blood does not differentiate brain tumor, alcoholic or narcotic intoxication. They are alike in inducing no leucocytosis, as a rule. Very occasionally leucocytosis may occur with any one of them, but in such cases there is rarely more than a slight polynuclear neutrophilic increase.

—*Wile.*

PRIMARY OPACITY OF THE CORNEA

Opacity from the action of lime or other metallic caustics, can be cleared up by chemically dissolving the opaque tissues. The best measure for the purpose is a mixture of ammonium chloride and tartaric acid. This is applied to the cocainized eye, beginning with a four-per-cent solution of ammonium

chloride, to which from 0.02 to 0.1 per cent of tartaric acid is added; the former can be increased to ten per cent and more, but no more tartaric acid can be added.—*Guillery.*

DIAGNOSTIC HINTS

Always examine a child suffering from chorea for the presence of adenoids. The removal of the growths in the back of the pharynx may cure a mild case.—*Amer. Jour. of Surg.*

Septic troubles arise more rapidly when a gall-stone is blocked in the common duct than when stones merely block the gall-bladder, because the first-named part is richer in lymphatics.—*Murphy.*

BE THANKFUL

If you have the sense to realize the inevitable, unavoidable, and the way of the world, and if you have the sense to talk over, in a friendly way, the first delicate situation that arises, the difficulties will disappear and recurrences may be made impossible. A man of whom you may have heard as the incarnation of unprofessional conduct, and who has been held up as an example of all that is pernicious, may be, in reality, a very good fellow, the victim of petty jealousies, the mark of the arrows of the rival faction, and you may, on acquaintance, find that he loves his wife and is devoted to his children, and that there are people who respect and esteem him. After all, the attitude of mind is the all-important factor in the promotion of concord. When a man is praised, or when a young man has done a good bit of work in your special branch, be thankful—it is for the common good. Envy, that

Bulgarian
Mul

(Pure living cultures of the B

For the treatment of intestinal
intestinal putrefaction and preven
from the intestines, and, accordin
tissue changes incident to senility,
scribing Bulgarian Bacillus

Three points are essential:

1. Specify the true Bulgaria
2. The culture must be free

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ulcers, hemorrhage of the stomach, in excessive vomiting, in paralysis of the esophagus, in surgical operations upon the liver and gall-gladder, in cancer of the stomach, where it may be located, and in obstructions of the bowels until operative measures may be undertaken to remove the cause.

MENINGITIS, KERNIG'S SIGN

Examine the patient in the dorsal decubitus, and then sitting. In the first position it is very easy for the patient to extend the leg completely; in the sitting position, however, the leg can no longer be extended completely. In very marked cases of meningitis, the leg can only be extended 90 to 100 degrees, and in all cases not beyond 135 to 140 degrees. As soon as the patient lies down, complete extension is possible.

SOME MISTAKES OF THE DOCTORS

It has occurred to me many times, in the past two years, that the practise of medicine is undergoing a complete radical change.

That the public in general is learning to depend less and less upon the doctor. That every new fad is eagerly followed by many whom we have always looked upon as intelligent. We are often pained and shocked that many of our good patients take to Christian science, osteopathy, Emmanuel movement, physical culture, Fletcherism, viavi, shoestore arch-supporters, drugstore rectal dilators, peddlers, vibrators, two-dollar electric batteries and ten-dollar electric belts, and the thousand and one advertised fakes exploited by our own newspapers as well as slick agents who first visit the doctor and

pain of the soul, as Plato calls it, should never for a moment afflict a man of generous instinct and who has the sane outlook in life.—*William Osler.*

INDICATIONS FOR THE MASTOID OPERATION

1. Mastoiditis is always subsequent to purulent inflammation of the middle ear.
2. Tenderness of the bone is an important symptom when present, but the mastoid may be full of pus with absolutely no tenderness.
3. Bulging of the canal wall is a most important symptom.
4. The absence of temperature is no guide whatever.
5. Improvement in the hearing is usually indicative of subsiding inflammation in the middle ear.
6. The operation is safe; delay may be dangerous.—*Hammond.*

INCIPIENT CANCER

In the early stages of cancer it is, of course, as a rule, possible to reach the adjacent infected glands, and so with cancer of the lip. I believe it is important not to content ourselves merely with the V-shaped incision, but that we ought to imagine the original focus working its way from the point of origin through a lymphatic vessel and being temporarily arrested in the network of the lymphatic gland, and we ought to base our operation on that idea.—*Warren.*

INDICATIONS FOR NUTRIENT ENEMATA

Nutrient enemata are indicated in severe cases of acute gastritis, in chronic gastritis, in gastric

ulcers, hemorrhage of the stomach, in excessive vomiting, in paralysis of the esophagus, in surgical operations upon the liver and gall-gladder, in cancer of the stomach, where it may be located, and in obstructions of the bowels until operative measures may be undertaken to remove the cause.

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later the dear public, selling to the aforesaid dear public for forty per cent less than to the doctor.

We find in the homes of patients pretty nearly all the things we have used in our practice, and some of the things we had thought of using some time, but haven't got around to it.

We find that many of our patients whom we have treated for rheumatism are using some form of arch-supporters, many times to our chagrin, with comfort and benefit, especially if the supporter happens to fit. We find that some of our patients whom we have treated for headache for years have suddenly been cured by securing properly fitting glasses, and who were put on the right track, not by the doctor, but by some friend who had found similar relief.

Some of our long standing rectal cases that we have failed to relieve through carelessness on our part (or lack of interest) have been cured by a set of rectal dilators furnished by the druggist.

I once listened to a very interesting lecture by a celebrated lawyer on "some mistakes of Moses," and it has occurred to me that perhaps it might be of profit to us all to mention some of the mistakes of doctors.

It is a mistake to give medicine for relief of headache without impressing the fact upon the patient that a headache is only a symptom, that it is probably curable, and that with his co-operation you can almost certainly cure it. Probably more than fifty per cent of the headaches are due to eye-strain, many are due to constipation, indigestion and to faulty metabolism.

It is a mistake to allow a patient suffering from rheumatism of the lower extremities to go without

a thorough examination of the feet, especially arches. It is a mistake to treat all cases of chronic constipation without an examination of the rectum for a tight sphincter, hemorrhoids or other rectal disease that may be a causative factor.

It is a mistake to laugh at the so-called "growing pains" of children, for they are nearly always rheumatic.

It is a mistake to advise whipping a child for bed-wetting, for it may be due to some irritation of the bladder, or an abnormal prepuce which needs dilating or removal.

It is a mistake to tell a woman that the small growth in the breast she shows you is only an enlarged gland; in six months it may be too late to save the woman's life by an operation for cancer.

It is a mistake to allow your medical journals or books to remain on the waiting-room table.

It is a mistake to give a patient a prescription for anything for the relief of pain—with all due respect for the pharmacist.

I don't believe we all pay attention enough to our chronic cases. We lose interest in many cases that we might profitably study up, profitably both to the patient and to ourselves.

Every patient that goes to the doctor believes he is ill. They may make light of it at the time, but if they were not a little worried or annoyed they would not come, so it is up to us to do something for them—something they will appreciate. It is our duty to keep them away from the charlatan and the quack, whether their ailments are fancied or real.

I must admit that the average patient wants medicine, and feels cheated if we do not give it.

The Cancer Problem.

venture to predict that within the next ten
s, even though the essential cause of cancer
till undiscovered, that if the public will heed
e pre-cancerous conditions, and if the physi-
s will give to chronic irritation the impor-
e it deserves in relation to cancer in such
litions as cholelithiasis, gastric ulcers, lacer-
cervices, enlargement of the prostate, and
rs in which chronic irritation is prominent,
remembering that all growths upon the neck,
r and extremities are at the beginning be-
in character, and that it is at this time they
ld be removed and not wait for the develop-
t *of malignancy*—if these precautions are
d the mortality from cancer within the
en years will be greatly reduced through
strumentality of preventive surgery.—
z, in New York State Journal of Med-
13

pain of the soul, as Plato calls it, should never for a moment afflict a man of generous instinct and who has the sane outlook in life.—*William Osler.*

INDICATIONS FOR THE MASTOID OPERATION

1. Mastoiditis is always subsequent to purulent inflammation of the middle ear.
2. Tenderness of the bone is an important symptom when present, but the mastoid may be full of pus with absolutely no tenderness.
3. Bulging of the canal wall is a most important symptom.
4. The absence of temperature is no guide whatever.
5. Improvement in the hearing is usually indicative of subsiding inflammation in the middle ear.
6. The operation is safe; delay may be dangerous.—*Hammond.*

INCIPIENT CANCER

In the early stages of cancer it is, of course, as a rule, possible to reach the adjacent infected glands, and so with cancer of the lip. I believe it is important not to content ourselves merely with the V-shaped incision, but that we ought to imagine the original focus working its way from the point of origin through a lymphatic vessel and being temporarily arrested in the network of the lymphatic gland, and we ought to base our operation on that idea.—*Warren.*

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Nutrient enemata are indicated in severe cases of acute gastritis, in chronic gastritis, in gastric

ulcers, hemorrhage of the stomach, in excessive vomiting, in paralysis of the esophagus, in surgical operations upon the liver and gall-gladder, in cancer of the stomach, where it may be located, and in obstructions of the bowels until operative measures may be undertaken to remove the cause.

MENINGITIS, KERNIG'S SIGN

Examine the patient in the dorsal decubitus, and then sitting. In the first position it is very easy for the patient to extend the leg completely; in the sitting position, however, the leg can no longer be extended completely. In very marked cases of meningitis, the leg can only be extended 90 to 100 degrees, and in all cases not beyond 135 to 140 degrees. As soon as the patient lies down, complete extension is possible.

SOME MISTAKES OF THE DOCTORS

It has occurred to me many times, in the past two years, that the practise of medicine is undergoing a complete radical change.

That the public in general is learning to depend less and less upon the doctor. That every new fad is eagerly followed by many whom we have always looked upon as intelligent. We are often pained and shocked that many of our good patients take to Christian science, osteopathy, Emmanuel movement, physical culture, Fletcherism, viavi, shoestore arch-supporters, drugstore rectal dilators, peddlers, vibrators, two-dollar electric batteries and ten-dollar electric belts, and the thousand and one advertised fakes exploited by our own newspapers as well as slick agents who first visit the doctor and

chloride, to which from 0.02 to 0.1 per cent of tartaric acid is added; the former can be increased to ten per cent and more, but no more tartaric acid can be added.—*Guillery.*

DIAGNOSTIC HINTS

Always examine a child suffering from chorea for the presence of adenoids. The removal of the growths in the back of the pharynx may cure a mild case.—*Amer. Jour. of Surg.*

Septic troubles arise more rapidly when a gall-stone is blocked in the common duct than when stones merely block the gall-bladder, because the first-named part is richer in lymphatics.—*Murphy.*

BE THANKFUL

If you have the sense to realize the inevitable, unavoidable, and the way of the world, and if you have the sense to talk over, in a friendly way, the first delicate situation that arises, the difficulties will disappear and recurrences may be made impossible. A man of whom you may have heard as the incarnation of unprofessional conduct, and who has been held up as an example of all that is pernicious, may be, in reality, a very good fellow, the victim of petty jealousies, the mark of the arrows of the rival faction, and you may, on acquaintance, find that he loves his wife and is devoted to his children, and that there are people who respect and esteem him. After all, the attitude of mind is the all-important factor in the promotion of concord. When a man is praised, or when a young man has done a good bit of work in your special branch, be thankful—it is for the common good. Envy, that

skin affections to cleanse and soothe prior to the applications of ointments, etc.

NEW MORPHINE SUBSTITUTE

Gelseminine is rapidly growing in favor, as presenting most of the benefits accruing from the use of morphine without any of its disadvantages. Gelseminine is a sedative; uniform in its actions, widely applicable, and safe in that when the doses are pushed beyond a remedial limit it affords unvarying indications (ptoses, etc.) of this fact long before an unsafe dose has been reached. It can be given in the usual way, or hypodermically, causing no irritation in the latter instance. It is especially applicable as a sedative, antipyretic and relaxant in cases of children, as well as in those of adults.

TONICS

Sunshine, air, pure water, good food and a cheerful disposition are the genuine "tonics."

SWALLOWED SHARP-POINTED FOREIGN BODIES

I would warn against the administration of purgatives in these cases, as perforation may thereby be promoted. I have several times had patients eat heartily of solid food in order to dilate the gastro-intestinal canal, thinking the body would more readily pass through, and so far have not been disappointed. Finely cut woolen fibre beaten up with an egg, has also been recommended.

TUBERCULAR ULCERS

It should be borne in mind that exposure of local tubercular ulcers to the direct rays of the sun for

pain of the soul, as Plato calls it, should never for a moment afflict a man of generous instinct and who has the sane outlook in life.—*William Osler.*

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later the dear public, selling to the aforesaid dear public for forty per cent less than to the doctor.

We find in the homes of patients pretty nearly all the things we have used in our practice, and some of the things we had thought of using some time, but haven't got around to it.

We find that many of our patients whom we have treated for rheumatism are using some form of arch-supporters, many times to our chagrin, with comfort and benefit, especially if the supporter happens to fit. We find that some of our patients whom we have treated for headache for years have suddenly been cured by securing properly fitting glasses, and who were put on the right track, not by the doctor, but by some friend who had found similar relief.

Some of our long standing rectal cases that we have failed to relieve through carelessness on our part (or lack of interest) have been cured by a set of rectal dilators furnished by the druggist.

I once listened to a very interesting lecture by a celebrated lawyer on "some mistakes of Moses," and it has occurred to me that perhaps it might be of profit to us all to mention some of the mistakes of doctors.

It is a mistake to give medicine for relief of headache without impressing the fact upon the patient that a headache is only a symptom, that it is probably curable, and that with his co-operation you can almost certainly cure it. Probably more than fifty per cent of the headaches are due to eye-strain, many are due to constipation, indigestion and to faulty metabolism.

It is a mistake to allow a patient suffering from rheumatism of the lower extremities to go without

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℞

Potassii chloratis	grs. xc-cxx	
Glycerin	ad drs. ij	
Aquæ	ad ozs. x	M.

Sig.: Use as mouth-wash in syphilis during the administration of mercury.

℞

Liq. hydrarg. nitratis	drs. j-iv	
Aquæ	q. s. oz. j	M.

Sig.: To be applied to the sloughing ulcers of tertiary syphilis. As the application is very painful, cocaine should first be applied.

℞

Sodi. bicarb.	grs. x	
Glycerine	dr. j	
Aquæ	ad drs. iv	M.

Sig.: Drop in the ear three times daily to soften inspissated cerumen preparatory to removing with a syringe.

℞

Hydrozone (15 vol.)	drs. iij	
Aquæ	drs. iij	M.

Sig.: Use same as preceding.

℞

Acidi carbolic (1-5 per cent)	oz. j	
Glycerine	oz. j	M.

Sig.: Drop into ear to relieve pain in middle-ear inflammation,

℞

Peroxide of hydrogen	oz. ss

Sig.: A few drops into ear in middle-ear suppuration.

℞

Camphor (reduced to a fine powder with a few drops of rectified spirits)	dr. ss	
Chloral hydrate	dr. ss	M.

Sig.: To be applied externally as an anesthetic in neuralgic and other affections of the throat.

℞

Hydrarg. oxidi rubri	grs. iv	
Pulv. sacch. albi.	oz. ss	M.

Sig.: To be blown into the nose after cleansing in ozæna.

℞

Iodoformi	grs. v-x	
Menthol	grs. iij-v	
Lanolin	oz. ss	
Liq. vaselin	oz. ss	M.

Ft. ung. Sig.: To be applied to the interior of the nose with a brush in ozæna or ulcer of the septum.

℞

Creolin	M. j-iv	
Aquæ	oz. j	M.

Sig.: Antiseptic and deodorant, to be used in atrophic rhinitis, syphilitic and other ulcerations, and in diseases of the accessory sinuses.

℞

Sanguinariæ canadens	M. v-xxx	
Aquæ tepid	oz. ss	M.

Ft. lotio. Sig.: To be used with an atomizer or syringe morning and night for ozæna.

℞

Zinc sozoiodol	grs. xlviij	
Talc	q. s. oz. j	M.

Sig.: To be blown into the nose in atrophic rhinitis after cleansing the nose from crusts.

℞

Menthol	grs. xlviij	
Toluol	drs. ij	
Sol. perchloride iron	dr. i	
Alcohol absolute	oz. j	M.

Sig.: To be applied locally in diphtheria or pseudodiphtheria. (Loffler.)

℞

Acid lactici	drs. j-ij	
Aquæ	oz. j	M.

Sig.: To be used with an atomizer in diphtheria as a solvent of the membranous exudate. (L. Browne.)

℞

Acid sulphurosi	oz. ss-j	
Aquæ	ad oz. x	M.

Sig.: To be used as gargle in diphtheria, pseudodiphtheria, and in mycosis. By some it is considered as almost specific in diphtheria.

℞

Aristol,
Europhen,
Nosophen,
Iodol,
Iodoform.

Sig.: To be blown into the nares in empyemia of the accessory sinuses.

℞

Aluminis	grs. lx	
Acidi tannici	grs. lx	
Aquæ rosea	ozs. x	M.

For Burns.

Renner in *British Med. Jour.* recommends a powder made up of one part of subnitrate of bismuth to two parts of kaolin. A thick layer of this powder is placed over the burnt surface after it has been thoroughly cleansed. Over this he bandages a layer of sterilized gauze, the whole being finally covered by thick layers of wadding. This dressing is changed every day so long as there is much discharge, the injured area being submerged in a partial or complete bath, according to the extent and situation of the burn. By this simple and cheap treatment which arrests free secretion and prevents septic infection, pain, it is said, is relieved and the temperature is kept down. In case there is a rash with much itching around the burn, suspend the use of the powder temporarily.

Sig.: To be used as a gargle in relaxation of the uvula and congestion of the fauces.

BURNS

In the treatment of burns a German writer makes a very simple suggestion which he claims is of much value. He covers the burnt surface with a piece of linen cloth that fits closely over the surface and is held around the edges of the burn by small strips of adhesive plaster. This linen he keeps wet with cold water, renewing the water constantly for a number of hours. He claims the best possible results from this simple course, except the labor of constantly wetting the cloth to preserve a low temperature of fifty or sixty degrees. If he would wet the cloth with a strong solution of the bicarbonate of soda at the first, the heat and pain, I believe, would subside more quickly, permitting later the application of a simple wet compress which would not have to be changed for some hours as the low temperature would not be required.

PICRIC ACID IN BURNS

In the treatment of superficial burns, it is becoming quite common to use a solution of picric acid in the proportion of a dram of the acid to a pint of water. Gauze saturated in this solution and applied to a superficial burn, large or small, will quickly relieve pain and promote healing. The use of full strength carbolic acid is advised, but over a large surface there is too much danger of absorption.

After the burning heat and pain are entirely relieved, an ointment may be prepared of carbolic acid, 5 grains, bismuth subnitrate, 3 drams, lanolin, 1 1-2 ounces, olive oil, 1-2 ounce, and freely applied. The soothing effect of this and its active healing properties are great, and it will do more than any other formula with which I am familiar, toward preventing the formation of scars. In fact in some cases in which I have used it there has been no scar formed at all, but normal healthy skin formed quickly.

RIGOR MORTIS

A short time after death the muscles pass into a condition of extreme rigidity or contraction, which lasts from one to five days. In this state they offer great resistance to extension, their tonicity disappears, their cohesion diminishes, their irritability ceases. The time of the appearance of this post-mortem or cadaveric rigidity varies from a quarter of an hour to seven hours. Its onset and duration are influenced by the muscular irritability at the time of death. When the irritability is impaired from any cause, such as disease or defective blood supply, the rigidity appears promptly, but is of short duration. After death from acute disease, it is apt to be delayed, but to continue for a longer period. The rigidity appears first in the muscles of the lower jaw and neck; next in the muscles of the abdomen and upper extremities; finally in the trunk and lower extremities. It disappears in practically the same order.

Chemic changes of a marked character accompany this rigidity. The muscles become acid in reaction from the development of sarcolactic acid; it gives off a large quantity of carbonic acid, and is shortened and diminished in volume.

The immediate cause of the rigidity appears to be a coagulation of the myosinogen within the

sarcolemma, with the subsequent formation of myosin and muscle serum. In the early stages of coagulation restitution is possible by the circulation of arterial blood through the vessels.

The final disappearance of this contraction is due to the action of acids dissolving the myosin, and possibly to putrefactive changes.—*Brubaker.*

THE SPINAL CORD

The spinal cord varies from sixteen to eighteen inches in length, about one-half inch in thickness, weighs one and one-half ounces, and extends from the atlas to the second lumbar vertebra, terminating in the filum terminale.

It is cylindric in shape, and presents an enlargement in the lower cervical and lower dorsal regions, corresponding to the origin of the nerves which are distributed to the upper and lower extremities. The cord is divided into two lateral halves by the anterior and posterior fissure. It is composed of both white or fibrous and gray or vesicular matter, the former occupying the exterior of the cord, the latter the interior, where it is arranged in the form of two crescents, one in each lateral half, united by the central mass, the gray commissure; the white matter being united in front by the white commissure.

—*Brubaker.*

THE FREQUENCY OF THE HEART'S ACTION

It varies at different periods of life, but in the adult male it beats about seventy-two times a minute. It is influenced by age, exercise, posture, digestion, and so forth.

Before birth, the number of pulsations a minute averages	140
During the first year it diminishes to	128
During the third year it diminishes to	95
From eighth to fourteenth year it averages	84
In adult life the average is	72

COURSE OF THE BLOOD THROUGH THE HEART

The venous blood returned to the heart by the superior and inferior vena cava is emptied during the diastole, into the right auricle, in the contraction of which it is forced through the right auriculo-ventricular opening into the right ventricle and distends it. Upon the contraction of the ventricle the blood is propelled through the pulmonary artery into the lungs, where it undergoes æration and is changed in color.

The arterial blood is now collected by the pulmonary veins and poured into the left auricle; thence it passes into the left ventricle, which becomes fully distended. Upon the contraction of the ventricle, the blood is propelled into the aorta, and by it distributed to the system at large, to be again returned to the heart by the veins.—*Brubaker.*

TOTAL AMOUNT OF BLOOD IN THE BODY

Is estimated to be about one-eighth of the body-weight; from sixteen to eighteen pounds in an individual of average physical development. The quantity varies during the twenty-four hours, the maximum being reached in the afternoon, the minimum in the early morning hours.

THE AMOUNT OF BODY SECRETIONS

Amount of saliva secreted in twenty-four hours, about three and one-half pounds.

Amount of gastric juice secreted in twenty-four hours, about eight to fourteen pounds.

Amount of intestinal juice secreted in twenty-four hours, about one pound.

Amount of pancreatic juice secreted in twenty-four hours, about one and one-half pounds.

PROBING FOR NEEDLES OR SPLINTERS

Which have deeply penetrated the skin may be facilitated and rendered painless by the use of the hypodermic syringe, as suggested by Neas. After an injection of cocaine solution near the point of entrance of the foreign body, the needle is left in place and used as a probe. By gently pushing it on and moving it about, the point clicks against the foreign body, and its location is thus easily determined.

HEMOPTYSIS

Try inhalation of amyl nitrite, have patient inhale three drops. The bleeding usually stops at once.

PEDIATRIC POINTS

A serrated tongue generally indicates an atonic condition of the stomach.

A depression of the fontanelles of an infant is an indication for stimulants and tonics.

A pale mouth, with the sphincters decidedly turned in, generally points to an ailment in the alimentary canal.

Tears in the eyes of a crying infant are proof of pain, not of mere crabbedness.

A pearly conjunctiva and obstinate fissures of the upper lip are unmistakable signs of tubercular infection.

Pain in the ear may be caused by disease in the larynx.

It is generally a bad sign when a child bears an alcoholic stimulant well.

The younger the subject suffering from acute rheumatism, the greater is the danger from heart complication.—*Med. Council.*

To obtain infantile sputum, excite a cough by irritating the pharynx, and then catch the sputum brought up into view upon a bit of gauze or muslin. The cough may be excited by a spoon or tongue depressor, or better by a small bit of muslin in the jaws of an artery clamp. Upon this the secretion is easily secured when it is brought into view by the cough.—*Holt.*

CIRCULATION OF BLOOD IN THE FETUS

The blood returning from the placenta, after having received oxygen and being freed from carbonic acid, is carried by the umbilical vein to the under surface of the liver; here a portion of it passes through the ductus venosus into the ascending vena cava, while the remainder flows through the liver and passes into the vena cava by the hepatic veins. When the blood is emptied into the right auricle it is directed by the Eustachian valve through the foramin ovale, into the left auricle, thence into the left ventricle, and so into the aorta to all parts of the system. The venous blood returning from the head

and upper extremities is emptied, by the superior vena cava, into the right auricle, from which it passes into the right ventricle, and thence into the pulmonary artery. Owing to the condition of the lung only a small portion flows through the pulmonary capillaries, the greater part passing through the ductus arteriosus, which opens into the aorta at a point below the origin of the carotid and subclavian arteries. The mixed blood now passes down the aorta to supply the lower extremities, but a portion of it is directed, by the hypogastric arteries, to the placenta, to be again oxygenated.

At birth, the placental circulation gives way to the circulation of the adult. As soon as the child begins to breathe, the lungs expand, blood flows freely through the pulmonary capillaries, and the ductus arteriosus begins to contract. The foramen ovale closes about the tenth day. The umbilical vein, the ductus venosus, and the hypogastric arteries become impervious in several days, and ultimately form rounded cords.

VARIOLA VS. VARICELLA

The vesicles in chicken-pox are unilocular, while in small-pox they are multilocular, the practical result of this pathological fact being that if a chicken-pox vesicle be pricked with a needle, its contents can be completely evacuated, and the cell will collapse; whereas in small-pox, if you make twenty pricks with a needle, the vesicle will not collapse, because, being multilocular, it is impossible to empty it.

REMOVAL OF EAR WAX

Hardened wax may be softened by the instillation of a solution of sodium bicarbonate, grs. x, glycerin dr. j, aquæ, q. s. oz. ss. Sig.: Three times a day, in syringing, the stream should be directed along the upper wall of the canal, the object being to force the water behind the plug, and not against it. If much force is used, vertigo often results.

TO BOIL CATHETERS

Boiling silk catheters in saturated solution of ammonia sulphate prevents them from becoming cracked and rough. Boiling for from three to five minutes causes complete sterilization, and after removal they may be used immediately, because ammonium sulphate are non-irritating to mucous membranes.—*Herman.*

ASPHYXIA AND APNEA OF THE NEW-BORN

Clean the mucus out of nostrils and throat; catheterize the trachea, and suck up the mucus. Marshall Hall's method: Place child on abdomen, then bring into lateral posture, repeating slowly and deliberately. Schultze's method: Place the thumbs upon the anterior surface of thorax, the indices in the axillæ, and the other fingers along the back, the face of the child being from you; rotate the child, by swinging upward, so that the inferior extremities turn over toward you. In a moment re-rotate to the original position. Do not support head or legs in the forward rotation; their bending upon or toward the abdomen gives a forced expiration.

FOREIGN BODIES IN THE AIR PASSAGES

If the foreign bodies are round and smooth, invert the patient's head downwards and strike upon the back. The bristle-probang is a good instrument

the arms down to the sides again, causing the elbows almost to meet over the pit of the stomach, and thus producing contraction of the chest. This imitation of the act of respiration should be continued at the rate of fifteen or sixteen times per minute, as in health.

Marshall Hall's Method.—The person should be placed flat on the face, gentle intermittent pressure being made with the hands on the back, the body turned on the side, or a little beyond, then on the face, and the same pressure, etc.; continued as at first. The whole body must be worked simultaneously. The same number and frequency of these artificial processes of respiration should be employed as in the other method.

The Michigan Method.—Lay the body face down, the head upon the arm, and stand astride of it; grasp it then about the shoulders and arm pits, and raise the chest as high as you can without lifting the head quite off the arm, and hold it about three seconds; then replace the body upon the ground, and press the lower limbs downward and upward, with slowly-increasing force, for ten seconds; then suddenly let go, to perform the lifting process again. Whichever process be employed, the effort to restore the temperature of the body must be maintained, the body being well rubbed in an upward direction with the hands, with warm flannels, etc.; bottles of hot water, hot bricks, being applied to the stomach, the axillæ, the soles of the feet, etc.; stimulants and beef tea being judiciously administered when restoration is about taking place. The attempts at resuscitation must be persevered in for several hours, if necessary. In artificial inflation, always press the larynx

and trachea against the vertebral column, so as to close the esophagus and thus prevent the air entering the stomach. Laryngotomy or tracheotomy, with or without catheterization or forced insufflation of air or oxygen, have proved successful, as also has electro-puncture (Garratt).

AFTER LONG SUBMERSION IS RECOVERY POSSIBLE?

According to Harley, dogs kept under the water one to twelve minutes always die, if water had entered the lungs. If it had not, the trachea being plugged, they survive a submerions of four minutes.

When persons rise after sinking they usually get some air, and less speedily come into a state from which recovery is impossible. The greatest period between the last inspiration and the stoppage of the heart is four minutes. Some think that no recovery has been made after complete cessation of the heart's action. We infer that after complete submersion for five minutes recovery is improbable, unless the person had been previously choked or in a fainting state, so that no water entered the lungs. But in Anderson's case, the patient had been under the water at least fifteen minutes, and in Garratt's the time was variously estimated at from fifteen to sixty minutes.

When is a case hopeless.—Harley says, "If the eyes are open, the pupils dilated, the conjunctiva insensible, the countenance placid, the skin cold, frothy mucus round the nostrils and mouth, no attempt at respiration, and the heart's action inaudible (when the ear is applied to the chest), the case is hopeless.

SIGNS OF DEATH

The following have been suggested as methods of deciding whether death has occurred: Tie a string firmly about the finger; if the end of the finger becomes swollen and red, life is not extinct. Insert a bright steel needle into the flesh; if it tarnishes by oxidation in the course of half an hour, life may be considered not extinct. Inject a few drops of liquor ammonia under the skin; during life a deep red or purple spot is formed. Moisten the eye with atropine; during life the pupil will dilate. Look at a bright light, or at the sun, through the fingers held closely side by side; during life the color is pink; after death a dead white. After death a dark spot is said to form gradually on the outside of the white of the eye, from drying of the sclerotic, so that the dark choroid shows through. Putrefaction is a sure sign of death; better delay for it than to run any risk of burying alive.

GENERAL TREATMENT OF POISONING

(1) Eliminate the poison from the stomach. Emetics: Sulphate of zinc (grs. x-xxx); mustard in a glass of warm water; ipecac (grs. xx-xxx) followed by warm water in abundance. Hypodermatically, apomorphine, gr. i-x. Stomach-pump.

(2) Prevent the absorption of the poison. This is done by giving a chemical antidote which combines with the poison in the stomach, forming a substance which is insoluble or inert. In treating poisoning by vegetable substances, give patient a pint of water containing tannin, grs. x-xx; when stomach-pump or emetics are not at hand. Where

length and about three and one-half inches in breadth, weighing about 10 to 12 ounces in the male and from eight to 10 in the female.

The Liver.—Is a highly vascular, conglomerate gland, appended to the alimentary canal. It is the largest gland in the body, weighing about 45 to 60 ounces. Transverse measurement is 10 to 12 inches, antero-posterior, six to seven inches. Its functions are numerous. While its physiologic actions are not yet wholly understood, it may be said that it

1. Secretes bile.
2. Forms glycogen.
3. Assists in the formation of urea and allied products.
4. Modifies the composition of the blood as it passes through it.

The Stomach.—This organ is somewhat pyriform in outline, and occupies the upper part of the abdominal cavity. Weighs four and one-half to five ounces, is 10 to 12 inches in length, five inches deep, and three and one-half inches wide, and has a capacity of about five pints.

The Pancreas.—Is a flattened gland about six inches long, running transversely across the posterior wall of the abdomen behind the stomach; its duct opens into the duodenum. Is one and one-half inches broad. The pancreatic juice is one of the most important of the digestive fluids, is transparent, colorless, strongly alkaline, and viscid.

The Spleen.—Is a vascular or ductless gland, about five inches in length, weighs about five ounces, of a dark bluish color. During digestion the spleen becomes larger, its contents are increased in amount,

and after digestion it gradually diminishes in size, returning to normal condition.

The Kidneys.—Are bean shaped, are from four to five inches in length, two inches in breadth, and weigh four to six ounces.

The Brain.—Weighs, in man, about 50 ounces; in the female about 44 ounces.

Water in the Body.—Amount of water in the body weighing 145 pounds, 108 pounds.

Amount of Solids.—In a body weighing 145 pounds: 36 pounds.

Amount of Blood.—In the body: from 16 to 18 pounds.

Function of the Medulla Oblongata.—Controls the functions of insalivation, mastication, deglutition, respiration, circulation, etc.

Function of the Cerebellum.—Center for the coordination of muscular movement.

Function of Cerebrum.—Center for reason, intelligence, and will.

The Eye.—Has three coats: First, cornea and sclerotic; second, choroid; third, retina.

LANDMARKS—MEDICAL AND SURGICAL

THE ABDOMEN

Boundaries.—In front and at sides—by lower ribs, transversalis muscle, venter illi; behind—by vertebral column, psoas and quadratus lumborum muscles; above—by brim of pelvis.

Regions and Contents.—Right hypochondriac region: Right lobe of liver, gall-bladder, duodenum, pancreas, hepatic flexure of colon, upper part of right kidney, right suprarenal capsule. Epigastric region: Middle and pyloric end of stomach, left lobe of liver, lobules spigelii, pancreas. Left hypochondriac region: Splenic end of stomach, extremity of pancreas, spleen, splenic flexure of colon, upper half of left kidney, some convolutions of small intestines. Umbilical region: Transverse colon, part of great omentum, part of mesentery, duodenum (transverse part), some convolutions of small intestine. Right Inguinal region: Cæcum, appendix cæci, of small intestines, bladder, if distended, bladder in children, uterus in pregnancy. Left Inguinal region: Sigmoid flexure of colon, ureter.

Linea Alba.—Extends up middle line of body, from apex of ensiform cartilage to symphysis pubis.

Poupart's Ligament.—Is indicated by a well marked depression from the symphysis pubis outward to ant. sup. spine of ilium.

Lineæ Transversæ.—Some three are above umbilicus, none are below. First line is about level of umbilicus; second about four inches higher (level of lowest of tenth rib). Upper part of rectus muscle is divided by these lines into two portions (upper and lower).

Crest of Ilium.—Can be felt at lower part of abdomen. It ends in front in the ant. sup. spine of the ilium. When body of patient is erect the spines are just below level of promontory of sacrum. The highest part of the crest is on a level with bifurcation of aorta. The direction of the common iliac and ext. iliac arteries may be discerned by drawing a line from highest point of crest of ilium to the groin.

Spine of Ilium.—Length of lower extremity is measured from here, and is valuable as a landmark in determining nature of injuries to hip and pelvis. Examine position of spine with regard to trochanters.

Spine of Pubes.—This guide to the ext. abdominal ring may be found by pushing up skin of scrotum, or by abducting thigh, using the tense tendon of the abductor longus as a guide. It is situated external to the symphysis, about one-fourth inch, and lies about two-thirds inch above Poupart's ligament.

Spermatic Cord.—As it passes through ext. it can be felt and its course made out. The vas deferens can be felt at back of cord.

Epigastric Artery.—A line drawn from inner margin of internal ring up to middle of rectus muscle toward chest would indicate the direction of deep epigastric. Other surface markings that should be known are: Tip of sternum, edges of ribs, crest of pubes, position of navel.

THE PERINEUM

Make out the surface markings of the symphysis pubis, rami of pubes and ischium, tuberosity of ischium, position of triangular ligament, great sacro-ischiatic ligaments, apex of coccyx.

Anus.—A white line at junction of skin and mucous membrane is important, and is readily perceived. The fissure of anus is situated at the bottom of the cutaneous folds of external sphincter.

Raphe of Perineum.—Extends from anus up perineum to scrotum and penis; it is called the line of safety in making incisions, etc.

Central Point of Perineum.—Bulb of urethra is above it, artery of bulb likewise; perineal muscles meet here.

Triangular Ligament.—Is attached to back edge of rami of pubes and ischium; the lower border can be felt at this region. One inch below lower part of symphysis pubis, and about three-fourths inch higher than the central tendon, the urethra passes.

Rectum.—Track of membranous part of urethra can be felt through front wall of bowel. Prostate gland is about one and one-half to two inches from anus, and can be felt, also its lateral lobes. Finger can appreciate by touch also the following: Apex of trigone of bladder, one of ridges or folds of mucous membrane at lower part of rectum, ischio-rectal fossæ.

THIGH

Trochanter Major.—Top of trochanter is almost on level with spine of pubes. It is about three-quarters of an inch lower than top of head of femur.

The trochanter lies in a natural depression of hip and can be readily felt.

Sartorius.—If patient raises his leg, the direction and margins of this muscle can be easily made out.

Course of Femoral Artery.—A line midway between the ant. sup. spine if ilium and the symphysis pubis, to tubercle for adductor magnus on inner side of knee would indicate its course.

Saphenous Opening.—Located immediately below inner third of Poupart's ligament, about an inch and a half external to the spine of pubes. The femoral ring is about one-half inch higher than the above opening, just under Poupart's ligament.

Lymphatic Glands in Groin.—Inguinal glands lie along line of Poupart's ligament; the femoral, along outer side of saphena vein, and over saphenous opening. These clusters can be felt in thin persons.

Nelaton's Line.—A piece of string stretched from the anterior superior spine of ilium in front to the ischial tuberosity behind will pass over the great trochanter, and is termed Nelanton's line.

THE BUTTOCKS

Surface Markings.—Crest of ilium, post. sup. spine of ilium, spine of sacral vertebræ, coccyx, ischial tuberosity, great trochanter, fold of buttock.

Crest of Ilium can be readily felt behind, and traced as far as the post. sup. spine.

Posterior Superior Spine of Ilium is on a level with second sacral spine; it corresponds with the middle of sacro-iliac symphysis.

Sacral Vertebræ may be felt (spines) in middle line of body.

Coccyx is just above anus.

Fold of Buttock corresponds with lower margin of gluteus maximus.

Gluteal Artery.—A line drawn from post. sup. spine of ilium to top of great trochanter (rotated inwards) will show point where artery comes out of pelvis.

Pubic Artery.—A line from outer side of tuberosity of the ischium to post. sup. spine of ilium will show course; ischiatic artery is close to it.

THE KNEE

Bony Points.—Patella, tuberosities of condyles, tubercle of tibia for attachment of ligamentum, patella, tubercle of outer side of head of fibula, which lies at the outer and back part of tibia, being nearly on a level with the tubercle for attachment of ligamentum patella.

Ligamentum Patellæ.—This ligament, the tubercle of tibia, and the middle of ankle should be in the same line—that is, a straight one. The synovial membrane of knee-joint is situated behind the upper half of ligament; a synovial bursa and pad of fat lies behind the lower half.

Popliteal Tendons.—The biceps on outer side extend downward to head of fibula, on inner side we can feel three tendons, viz.: The semitendonosus (near middle of politeal space); semimembranosus; more internally the gracilis.

Popliteal Bursa.—It is situated in the popliteal space, between the tendon of the inner head of the gastro cnemius and the tendon of the semi-membranosus.

Popliteal Artery.—A line drawn from midway between the greater trochanter and tuberosity of the ischium to middle of back of knee (the ham) will show course of this artery. The great sciatic nerve also runs here.

Peroneal Nerve.—Parallel with inner border of tendon of biceps; it can be felt below knee just below head of fibula.

THE LEG AND ANKLE

Bony Points.—Tubercle of tibia, head of fibula, lower fourth of shaft of fibula.

Malleoli.—Inner malleolus is more to the front than the external one; it does not descend as low either. The notch in lower margin of this malleolus can be felt. The inner edge of patella, inner ankle and inner side of great toe should be in same vertical plane.

Tendons Behind Inner Ankle.—The tendon of tibialis anticus and upon it that of flexor longus digitorum can be felt above and behind the malleolus internus; the tendon of the first muscle can also be found close to the inner margin of the tibia.

Tendons in Front of Ankle.—Tendons of tibialis anticus, extensor longus pollicis extensor longus digitorum and the perineus tertius.

Popliteal Artery.—Divides into ant. and post. tibial arteries, at about one and one-fourth inches below head of fibula, or one inch below tubercle of tibia. About three inches below head of fibula the perineal comes off from the post. tibial.

Anterior Tibial Artery.—Lies close to bone, about one and one-fourth inches below head of fibula; a line, from the front of the head of the fibula to the middle of the front of the ankle, shows its subsequent course. At the point where it crosses

the front of the tibia and ankle it can be compressed and felt beating.

Posterior Tibial Artery.—It commences about one and one-fourth inches below head of fibula. A line drawn from the middle of the upper part of the calf to hollow behind inner ankle shows subsequent course; it can be felt beating here.

Saphena Veins.—The internal one can be seen over front of inner ankle. The external vein has a course behind the outer ankle and extends up the middle of the calf.

THE FOOT

Bony Points.—From behind along inner side of foot we can feel the following parts: tuberosity of os calcis projection of int. malleolus, susten taculum tali, tubercle of scaphoid bone (about one inch in front of int. malleolus), int. cuneiform bone, projection of first metatarsal bone, sesimoid bones of great toe, Along outer side of foot can be felt: The external tuberosity of os calcis, ext. malleolus, perineal tubercle of os calcis, projection of base of fifth metatarsal bone.

Lines of Joints.—Level of ankle joint is one-half inch above end of inner malleolus; the astragalo-scaphoid joint lies behind tubercle of scaphoid bone; a line drawn from the tubercle of the scaphoid to about one and one-half inches in front will show joint between the int. cuneiform bone, and the metatarsal of great toe; the line of the calcaneocuboid joint is midway between the external malleolus and the tarsal end of metatarsal bone of little toe; the joint between the fifth metatarsal bone and the cuboid is shown by the projection of the former bone.

Bend of Elbow.—Tendon of biceps can be felt here; pulsation of the brachial artery close to its inner side can also be noted.

Olecranon Process.—Near inner condyle. The ulner nerve lies in a depression between the olecranon and int. condyle. An important landmark of the elbow is the little "pit" on outer side of this process, immediately below the ext. condyle; head of radius can be felt and pronation of supination of forearm.

Tubercle of Radius.—In extreme pronation, it can be felt on back of forearm.

Interosseous Arteries.—The common interosseous is given off by the ulna about one inch below head of radius; it divides into ant. and post. interosseous half inch lower still.

Lymphatic Gland.—Just above inner condyle, in front of enter muscular septum.

Tuberosities.—Tuberosities of humerus, just beyond acromion process, can be felt through the fibers of deltoid; head of humerus can be felt high up in axilla.

Bicipital Groove.—May be felt by pressing in front of shoulder, when arm is pendant and supine; its direction is vertically downward.

FOREARM AND WRIST

Radius.—Styloid process can be felt; lower half of radius is accessible to touch.

Ulna.—In supination the margin of ulna can be felt from olecranon to styloid process. Apex of styloid process of ulna is parallel with radio-carpal joint. At back of wrist, head of ulna can be seen and felt; it is in relation with the tendons of ext. carpi ulnaris and extensor minimi digiti. When the forearm is supinated, the styloid process is felt posteriorly, and not the head.

Carpus.—The tubercle of the scaphoid bone is situated below the styloid process of radius (inner side of extensors of the thumb). The level of the radio-carpal joint is between the styloid process and tubercle. The trapezium is lower. Pisiform bone is immediately below ulna on the palm of hand, the cuneiform bone being on the inner side of this. The lowest transverse furrow on palmar aspect of wrist corresponds with upper edge of ant. annula ligament and inner carpal joint. The median nerve runs near the inner border of tendon of palmaris longus muscle.

Pulse.—Can be felt outside of tendon of flexor carpi radialis. Occasionally the superfivialis volæ runs beside of radial artery, so, feel pulse in both wrists when in doubt.

Tabatiere Anatomique.—This deep depression at root of thumb lies between the second and third extensor tendons of thumb; in it can be made out the relief of the superficial radial vein, the radial artery in its passage to back of hand and the metacarpal bone of thumb (upper part).

Course of Radial Artery.—A line drawn from outer border of tendon of biceps at the bend of elbow to front part of styloid process of radius would indicate the course of this artery.

Course of Ulna Artery.—From middle of bend of elbow to outer side of pisiform bone.

THE HAND

Digital and Palmar Furrows.—The first furrow of fingers does not correspond with metacarpal joint;

the second and third do correspond with their respective joints. The middle of the ant. annular ligament corresponds with the little depression between the ball of thumb and that of little finger. Of furrows in palm of hand, the only one of surgical interest is that which extends transversely across the lower third, from ulna borders to interval between fore and middle fingers. It almost corresponds with the metacarpal joints of fingers; with upper limit of the synovial sheaths of the flexor tendons of fingers; except the little finger; with the divisions of the palmar fascia (into four slips), and the transverse metacarpal ligament, which lies in same plane. The digital arteries divide or bofurcate a trifle below this furrow.

Palmar Arterial Arches.—The thumb, widely separated from the fingers, will indicate a line which corresponds with the line of the superficial arch of these arteries; thence their course is straight between shafts of the metacarpal bones. The deep palmar arch is one and one-half inches nearer wrist than superficial.

Metacarpal Joint of the Thumb.—Can be felt by tracing the dorsal surface of trapezium upward to prominence which indicates joint at bottom of "tabatiere anatomique."

Knuckles and Digital Joints.—First row is formed by ends of metacarpals; second row, by ends of first phalanges, etc.

THE HEAD

Supra—Scapular Artery.—Felt immediately above supra-orbital notch.

Temporal Artery.—The anterior branch ascends about one and one-fourth inches behind the ext. angular process of the frontal bone.

Occipital Artery.—About the middle of a line traced from the occipital protuberance to the mastoid process it can be felt.

Mastoid Process.—Situated behind the ear, where it can be felt.

Occipital Protuberance.—Felt at back of head, together with the sup. curved lines; thickest part of skull.

Superior Longitudinal Sinus.—A line traced from root of nose over head to occipital protuberance will indicate its position.

Lateral Sinus.—A line drawn from the occipital protuberance to front border of mastoid process will correspond with part of this sinus.

Middle Meningeal Artery.—The trunk of artery extends along the front lower corner of the parietal bone, one-half inch above, and one and one-half inches behind the ext. angular process of the frontal bone. It lies one and one-half inches above the zygoma.

Levels of Brain.—A straight line across the forehead, immediately above the eyes, will correspond with the level of the anterior lobes in front; a line from the ext. angular process of the frontal bone to upper part of meatus auditorius corresponds with the lower level of the anterior and middle lobes of the cerebrum; the lower level of the posterior lobe corresponds with a line drawn from the meatus auditorius to the occipital protuberance.

Axis of Auditory Canal.—Inward and forward toward the temple, but not directly transverse.

THE FACE

Pulley for Superior Oblique Muscle.—Can be felt beneath the int. angular process of the frontal bone.

Lower Jaw.—A line traced from the condyle of jaw to the angle indicates the posterior margin of the ramus.

Zygoma.—It lies in front of ear.

Seventh Nerve.—Its branches extend toward the eye, cheek and jaw. It emerges from the stylomastoid foramen, and after passing into the parotid gland supplies the facial muscles.

Parotid Duct.—The course of this duct can be indicated by drawing a line from the bottom of the lobe of ear to midway between the nose and the mouth. It opens into the mouth by a papilla opposite the second upper molar tooth.

Temporal Artery.—Can be felt between the root of zygoma and the ear.

Facial Artery.—At the point of its passage over the body of the jaw at the anterior edge of the masseter muscle, it can be distinctly felt; also at the corner of the mouth; and by side of nasal wing, up to inner side of tendo oculi.

Facial Vein.—Course is from inner angle of eye to front border of masseter muscle; it is behind the artery.

Mouth.—The following parts can be seen and felt: Upper surface of tongue; a median furrow on its under surface; ranine vein on each side of this furrow; frænum linguæ has duct of submaxillary gland on each side; submaxillary gland can be found under the mucous membrane near angle of jaw; sublingual glands are continued in long ridges of mucous membrane on each side of floor of mouth; behind symphysis of jaw, the genio-hyoglossi attachment can be felt.

Throat.—Finger can be passed as far as the bottom of the cricoid cartilage. The following parts can therefore be examined: Epiglottis; pharynx to top of œsophagus; each side of hyoid space; great cornu of hyoid bone; the coronoid process of jaw, can be felt between the teeth and cheek; recess, on inner side of coronoid process, between it and the tuberosity of the sup. maxilla, where abscesses might burst; hamular process of the sphenoid bone can be felt behind the last molar on inner surface of upper jaw; lower part of pterygoid fossa, and internal pterygoid plate; on outer side of last molar (behind), part of the back of the antrum and the lower part of the ext. pterygoid plate can be felt. On roof of mouth, pulsation of post. palatine artery can be felt; gustatory nerve can be reached by finger close to bone below last molar tooth.

THE NECK

External Jugular Vein.—A line drawn from the angle of jaw to middle of clavicle will indicate its course.

Anterior Jugular Vein.—Extends along front border of sterno-mastoid muscle.

Parts in Central Line.—1. Body of os hyoides, just below int. maxilla. 2. Whole length of cornua can be outlined. 3. Gap above thyroid cartilage; it corresponds with the ant. thyro-hyoid ligament, and apex of epiglottis.

Thyroid Cartilage.—Can recognize the following: Lateral lobes (one each side); pulsation of sup. thyroid artery (on upper and front part of gland); below angle of thyroid cartilage there is an interval between it and the cricoid for the crico-thyroid membrane.

Cricoid Cartilage.—The projection of this cartilage can be felt; it corresponds to spaces between the fifth and sixth cervical vertebræ. The point where the omo-hyoid muscle crosses the common carotid artery can be shown by drawing a line transversely from the cricoid cartilage across the neck.

Sterno-Mastoid Muscle.—The common carotid is overlapped by its inner border.

Terno-Clavicular Joint.—Parts behind this joint: Commencement of vena innominata; behind this, the common carotid (left side); on the right side we have the division of the arteria innominata; deeper, the apex of the lung. The arteria innominata in children very frequently lies in front of the trachea, dividing a little higher than joint.

Subclavian Artery.—The outer border of sterno-mastoid corresponds with the outer edge of the scalenus anticus, this being a guide to this artery.

THE CHEST

Parts Behind First Bones of Sternum.—Left vena innominata (crosses sternum just below upper border); primary branches of aorta; trachea divides into two bronchii opposite junction of first and second bones of sternum; œsophagus. The highest part of aorta, which rest upon the bifurcation of the trachea, is about one inch from upper border of the sternum.

Arteria Innominata.—A line drawn from the middle of the junction of the first and second bone of the sternum to right sterno-clavicular joint would show its course. Sometimes its pulsation can be felt in the fossa above the sternum.

Internal Mammary Artery.—Its course is vertically behind the cartilages of the ribs. Its largest perforating branch passes through the second intercostal space.

Interval Below Clavicle.—It is triangular, and situated between the pectoralis major and deltoid muscles, being a guide to the coracoid process and axillary artery. This space corresponds with the axillary artery.

Apex of the Heart.—Pulsates between fifth and sixth ribs, and about two inches below the nipple, and one inch to the sternal side.

Heart.—Its upper border is on a level with the third costal cartilage; lower border extends from half an inch below lower end of sternum to fifth left space. The left boundary, at apex, is located to left of junction of fifth rib with its costal cartilage, and behind, or to left, of a line traced from left nipple downward. The right boundary extends about an inch to right of right edge of sternum. From behind, the base of heart is at level of the spines of sixth and seventh dorsal vertebræ; the apex is at level of ninth rib.

Valves of Heart.—Pulmonary valve (in most cases) is at level of third cartilage, or, in part, on left side of sternum, behind second intercostal space; the aortic valve is at level of third cartilage or third space; it is behind the left two-thirds, or one-half of the sternum; the mitral valve is oblique, and lies

behind the third intercostal space, near middle of sternum; the tricuspid valve is also oblique, and lies behind the middle of the sternum, the upper end being at the level of the third intercostal space.

Outline of Lungs.—Apex of lungs rises into neck behind sternal end of clavical and sterno-mastoid about one and one-half inches. The lungs converge from the sternal ends of the clavicals. No lung behind sternum (first bone); the margins of the lungs run parallel, from the level of the second costal cartilage to level of the fourth. Lungs diverge below level of fourth costal cartilage.

THE BACK

Spines of Vertebræ.—They can be counted by using friction with the fingers, down the back bone, when the tips of spines will redden. The spine of the third dorsal vertebra is level with the beginning of the spine of the scapula; the spine of the seventh dorsal vertebra is level with the inferior angle of the scapula; the spine of the last dorsal is level with the head of last rib.

Division of Trachea.—The division of trachea, in front, is level with junction of first and second parts of sternum; it is opposite the spine of the third dorsal vertebra; sometimes the fourth. On a level with the third intercostal space, a slight dimple in the skin marks the root of scapula; placing the ear on inner side of this dimple will cover the bronchus, particularly the right one. The lower border of trapezius is a guide to the spine of the twelfth dorsal vertebra. Below the last rib, on outer edge of erector spinæ, is the place where the kidney is most accessible to pressure. The lower border of the trapezius muscle is guide to the spine of the twelfth dorsal vertebra. This muscle together with the ligamentum nuchæ, can be felt in the pit of the neck.

The fourth lumbar spine is about level with the highest part of the ilium. The spines of the sixth and seventh cervicle vertebræ can be felt. The spines of the second dorsal vertebra correspond with the head of the third rib, the third with that of the fourth rib, and so on.

PARTS OPPOSITE SPINES OF VERTEBRAE

Fifth Cervical.—Cricoid cartilage; beginning of œsophagus.

Seventh Cervical.—Apex of lung.

Third Dorsal.—Apex of lower lobe of lung; aorta reaches spine; angle of bifurcation of trachea.

Fourth Dorsal.—The arch of the aorta ends; upper level of heart.

Eighth Dorsal.—Lower level of heart; central tendon of diaphragm.

Ninth Dorsal.—Passage of œsophagus and vena cava through diaphragm; upper edge of spleen.

Tenth Dorsal.—Lower edge of lung; liver comes to surface posteriorly; stomach (cardiac orifice).

Eleventh Dorsal.—Renal capsule; lower margin of spleen.

Twelfth Dorsal.—Passage of aorta through diaphragm; pylorus; lowest part of pleura.

First Lumbar.—Pelvis of kidney; renal arteries.

Second Lumbar.—End of cord; pancreas; duodenum; receptaculum chyli.

Third Lumbar.—Umbilicus; lower margin of kidney.

Fourth Lumbar.—Division of aorta; highest part of ilium.

UNCINARIASIS OR HOOK-WORM DISEASE

Historical.—The earliest references to a disease, which all authorities now believe to have been uncinariasis, are contained in an old Egyptian papyrus thirty-five hundred years old.

In the seventeenth and eighteenth centuries writers in South and Central America, and the West Indies, refer to a disease whose clinical features are identical with those of uncinariasis today. In Europe the disease was first described as occurring at Ansin in 1802, and Dubini at Milan, Italy, discovered the specific cause of the European type in 1843.

In the United States the disease was first described independently by a number of Southern practicians, under the terms "dirt-eaters' anemia" and "negro consumption." These were only clinical descriptions, and are scattered over the first half of the nineteenth century.

Not until 1893 was a case definitely recognized by the microscope in this country, by Blickham of St. Louis. From this time until December, 1900, only seven cases are recorded by three or four observers. In this year Dr. B. K. Ashford observed four cases, and deserves credit for first seriously calling attention to the disease.

In 1902, Dr. Charles Wardell Stiles, comparing specimens of worms collected from different sources, noticed a difference in the anatomy of the American and European worms, and so demonstrated a specific cause for the American type of the disease. In this same year he aroused the general interest of the medical profession in this malady, by making a southern tour of investigation, in which he demonstrated the great frequency and widespread distribution of this plague of our warm, sandy districts. That many had not taken advantage of this discovery was plain to me by the small number of cases reported in American literature. In January, 1903, Dr. Jos. Capps of Chicago could collect only 43 cases from the American literature.

I know I am correct in stating that doctors in our southern states, as a rule, have not recognized the great frequency of this malady, and the almost inconceivable harm it is working in their confiding patrons. This disease is second in importance to none in the South. In this statement I am not forgetful of tuberculosis, malaria and venereal diseases; nor do I stand alone in this broad assertion, but with every single investigator of this trouble. If there be those of the opposite opinion, they are so because they have not taken the trouble to systematically investigate the disease.

I shall now proceed to present evidence to maintain this broad statement as to the importance of uncinariasis:

Its importance will depend upon its (a) distribution, (b) frequency and (c) its pathological significance.

I shall now proceed to give the statistical evidence bearing on distribution and frequency, leaving the pathological significance for another subdivision.

Distribution and Frequency.—We should recall here that we are dealing with a disease 3,500 years old, and in this length of time it certainly has had time to widely disseminate itself. And so we find the

disease endemic the world over between the parallels 31° and 30° N. and 30° S.

In Egypt, where it is known as "Egyptian Chlorosis," it is found in every cadaver. In India, Manson states that some districts show 75 per cent of the population infected. In Madras, 32 per cent are infected. In Ceylon, Straits Settlements, and on this hemisphere in Brazil, and in Guinea, it is equally prevalent.

Last year in Porto Rico, where the total death-rate was 25,552, it was estimated that one-quarter died from this disease, such a menace to the industry of the island that the government has recently appropriated $5,000 for its investigation.

United States.—The disease was practically unheard of in this country in 1900, there being up to that time only seven cases recorded. The knowledge of the American profession dates from Dr. Stiles' work in 1902. So we have then in uncinariasis, a disease 3,500 years old, but from our knowledge of the malady, only three years old. Only a few men seem to have taken advantage of Dr. Stiles' work, so that today the disease for the most part is unrecognized. But please note this important point, that every single investigator who has heard Dr. Stiles' words of warning, and taken the trouble to investigate their truth, has most heartily endorsed his views as to the frequency and importance of uncinariasis, and his views which receive this unanimous and enthusiastic endorsement, are that in the Southern Atlantic, Seaboard and Gulf States uncinariasis is second in importance to no disease, not even excepting tuberculosis, malaria and gonorrhea. All one has to do to find the disease in the above-mentioned districts (i. e., warm, sandy districts of southern states), is to suspect its presence.

In the United States it has been found in New York, Pennsylvania, Indiana and Maryland, where it was most probably imported. In Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Texas, Louisiana, Missouri and California, it has been found developing naturally.

In an investigation as to the frequency of the disease in North Carolina last year, carried on under disadvantageous circumstances, I collected 147 cases. In the examination of 140 college students, 37 per cent were found infected, the great majority of these men looking perfectly well. In thirteen counties, from which all the men were examined, the frequency was 100 per cent per county. In the practice of one doctor we found 90 cases.

These figures, surprising almost beyond acceptance, only await a few years to be confirmed. I think I have said enough to convince anyone of the importance of uncinariasis looked at from the point of frequency and distribution.

Etiology.—This part of our subject naturally divides itself into two heads: First, a consideration of the anatomy and life cycle of the infectious agent; second, the route of infection. Now concerning the first of these two subdivisions, the anatomy and life cycle, I shall only touch on those points essential to a diagnosis and an intelligent understanding of the mode of entrance into the system.

For a more detailed account of the anatomy of the worm the reader is referred to Bulletin No. 10, by Dr. Charles Wardell Stiles, Marine Hospital and Public Health Service, Washington, D. C., or to the *American Journal of Medical Sciences*, Nov., 1903.

Anatomy.—Size, male, 6 to 9 mm.; female, 8 to 11 mm.

Diameter about the size of an ordinary pin.

Color, gray or yellowish white, often chocolate from decomposed contained blood.

Shape.—Straight or coiled, but always with cephalic extremity bent sharply backwards, giving the anterior extremity a hook-like contour, from which it gets its name, "hook-worm." Then again the tail of the worm is rather diagnostic, being blunt and expanded into an umbrella-like enlargement, perfectly visible to the naked eye.

The number of worms in a stool varies. The females are usually two or three times more numerous than the males.

The severest case contains 1,200 to 1,500. One case on record gave 1,728 worms. We may classify them as: Severe cases, 750 to 1,000; moderate cases, 350 to 750; mild cases, under 100.

Life Cycle.—The adult worm is found only in the small intestine of man, in the American type of the disease. In the European type it has been possible to infect lower animals with the uncinaria.

These worms deposit their eggs by the thousand in the bowel. These eggs cannot develop within the intestine.

This last fact makes autoinfection impossible. Therefore for every worm in the intestine, an embryo worm necessarily entered the system. The eggs, which can only hatch out when exposed to external conditions, are important from a diagnostic standpoint. These eggs, in size, measure 68 to 38 microns, in shape are oval and symmetrical, in structure composed of a brownish-yellow granular yolk, which is usually segmenting when seen microscopically, and composed of from two to eight cells. This yolk is enclosed by a beautifully transparent, laminated shell.

Occasionally the eggs contain an embryo. This is the case when the stool is two to four days old before it is examined. These eggs, cast off with the stool, when exposed to a temperature of from 22° to 37° C., kept in a semi-solid stool, and freely supplied with oxygen, hatch out into the rhabditiform embryo. This hatching is delayed by darkness, lack of oxygen, or too much moisture, the eggs perishing in water. The young embryo after three or four days casts his first skin, and reaches what is known as the second ecdysis of its development. This is the infective stage.

This worm lives well in water and plenty of moisture is necessary for its life. Loose has shown that these worms will pass through sand filters, and live for at least thirty days in water. This is important from an etiological standpoint. This completes the life-cycle outside the body.

Portals of Infection.—Three possible portals lie open to the young worm: (1) Through the food; (2) the drinking water; (3) through the skin in the lesion of ground-itch.

We will now proceed to advance proof showing each one of these to be possible portals of infection.

Dirt-eating is the simplest means of introducing the parasite and one can readily understand its possible infectiousness. By dirt-eating we mean either the accidental or wilful swallowing of dirt. Accidentally, this occurs when one eats with soiled hands, eats celery, onions, lettuce or any uncooked

vegetable. The wilful swallowing of clay, sand, etc., would of course afford a means of introducing the parasite. But this frequently is an effect and not a cause of the disease. Every clinician is familiar with the "longings" for almost unheard of articles of diet, such as clay, sand, mortar, etc., which occur in pregnancy and anemic states.

Drinking water.—Of course the eggs and the young embryos cannot live in water any length of time, and soon die. But during the second stage in its development it can find its way through sand filters and lives well in water for some time. Of course, in this way, water becomes a possible source of infection.

Ground-Itch.—In *The Journal of Tropical Medicine* for December, 1900, Elliot points out, from an enormous experience, the relation of ground-itch to climatic and geological conditions. These conditions are seen at a glance to be those necessary for the development of unçinaria. They are: (1) A soil infected with human feces; (2) bare skin; (3) the correct temperature for development, furnished by June, July and August weather, and (4) heavy rains, which add the required amount of moisture. Then Bently's attention was drawn to the possibility of relationship between hook-worm larvæ and ground-itch by his finding a rhatditiform embryo in the lesions of ground-itch. He furthermore proved this relation by applying a stool poultice, containing young worms, to the skin, in this way producing an erythema which was associated with the disappearance of the larvæ from the poultice. Part of this stool with dead larvæ (killed by heat) did not produce this lesion.

Next, Loose seems to have been the first to conceive of a relationship between this skin lesion and the intestinal infection. He appealed to an experiment which answered the question in the affirmative. He produced the disease in both man and dogs by applying poultices of infected feces to the skin. These dogs and the man were examined previous to the experiment and found free from the worms.

Thus we have positive evidence that ground-itch may be due to uncinaria larvæ, and that its lesion may be the portal by which the parasite reaches the intestine. A question of great importance just here is this: Of the three possible routes of infection, which is the one usually taken by the infecting parasite?

To answer this question I will simply quote our conclusions based on the study of 147 cases: "We conclude concerning the etiology of hook-worm disease, that ground-itch is by far the most important portal of infection, and that dirt-eating and contaminated water supply, while capable of infecting, are not nearly so important as ground-itch as a source of infection."

While space will not allow me to go into the evidence for this conclusion, I will give the main facts in its favor, and refer the reader to an article in *The Medical News*, November 19, 1904, for fuller details.

1. Ninety-nine and one-half per cent of all cases (147) gave a history of previous ground-itch.

2. Ground-itch precedes the onset of the symptoms of intestinal infection.

3. The severest cases give a history of the severest cases of ground-itch.

4. A glance at the age table shows at once that the disease is associated very definitely with the age when the child goes barefooted. It is so rare under three years because children are not very active in running about infected homes before this time. At this age the disease increases until the fifteenth year, when it again declines.

5. Wherever ground-itch is common, there uncinariasis is also common.

6. When patients cease to be troubled with ground-itch, improvement begins.

7. Usually a number in one family are infected. But occasionally you find only one of the family infected; in this case the history frequently shows this individual to be the only one who has ever suffered with ground-itch.

8. We have further met with the interesting condition, which for want of a better name we call "acute uncinariasis." This condition gives history of a very severe attack of ground-itch, and this followed in from three to six weeks by profound anemia, bloating and other symptoms, the whole resembling chronic parenchymatous nephritis. Microscopic examination of the stools shows a very severe infection with uncinaria. For these reasons we believe the portals by which these worms usually gain the system is through the skin.

To those who favor the contaminated food or drinking water as the most important portal, we would ask: First, why does it occur so rarely under three years of age? For who gets more dirt than the baby, and why should it harbor other intestinal parasites more frequently than any one else, yet fail to show hook-worms? And if drinking water is such an important factor, why should it be more frequent in children, who drink less water than adults?

Pathology.—This phase of the subject may be considered under two heads, local and general:

Local changes occur in the gastro-intestinal canal, and are due to the toxins and to the mechanical effects of the worms. These worms are most numerous in the jejunum, but they occur also in the duodenum and ileum. Some lie free in the intestinal contents, which also contain much mucus, decomposed blood and Charcot-Leyden crystals. Others are attached to the mucosa. These may have half their bodies buried in the mucosa, and some investigators claim to have found the entire worm in the submucosa. About the point of attachment there is a slight inflammatory swelling which is often ecchymotic. Microscopically there is an inflammatory proliferation of fibroblast and a dense cosinophilic infiltration.

General.—The liver is slightly enlarged, and shows, microscopically, an increase of pigment, due to decomposed blood, and also necrotic foci, which are supposed to result from a toxin set free by the worms, which toxin has a cytolytic action on the liver cells.

The spleen is usually enlarged and microscopically shows many eusinophiles. The blood in mild cases and in the early stages of severe cases shows a chlorotic condition of the red blood cells. Later, and in severe cases, the erythrocytes diminish in number, sometimes sinking to 1,000,000, and the hemoglobin index rises, so that in a late stage the disease may resemble pernicious anemia. The red blood corpuscles are destroyed by (a) being ingested by the

worms, (b) escaping from the small wounds into the intestine, and (c) by a hemolytic toxin set free by the parasites.

White Blood Cells.—A leucocytosis is the exception, but may occur. An eosinophelia of from five to fifty per cent exists in nearly all cases.

Nervous System.—All practicians are familiar with worms as a cause of many reflex disturbances, such as restlessness, grinding of the teeth, insomnia, and occasionally convulsions. In two of 118 cases, there were epileptic convulsions. But by far the greatest harm resulting from this infection is the general lowered vitality, making the patient a prey to the various pathogenic germs and decreasing the chances of recovery when infected with these germs. Labor capacity is diminished in many districts from 10 to 40 per cent. Physical and mental dwarfism finds one of its most potent etiological factors in uncinariasis.

Symptoms.—These may be considered under three heads: (1) historical, (2) objective symptoms, and (3) subjective symptoms.

Historical.—The patient usually states that he comes from the country or has lived there in the last six years. The country in which he lives is usually a warm, sandy section. The disease has usually lasted from one to two or even three years, before the patient applies for treatment. The condition is usually worse in the summer and improves in winter. A history of ground-itch is nearly always presented. On inquiry into the health of other members of the family it is found that some of them are similarly affected and may be even worse than the complaining patient.

Objective and subjective symptoms are variable, this variability depending upon two factors, first, the number of worms infecting, second, the duration of attack.

Objective.—The patient is usually under twenty-five years of age and very often under eighteen years and in a large percentage of cases poorly developed for the age. The face shows pallor of variable degree, dependent upon the above factors. The conjunctival vessels are often indistinct, while a peculiar symptom, and one upon which Dr. Stiles lays much stress, is the dull, blank, fishlike stare which the patient's eyes assume. The lips are often pale or bloodless. The whole face may be bloated, and always, in mild cases even, shows a certain muddy pallor. Upon examining the neck, cervical pulsations will often be observed, the distinctness of which is proportionate to the anemia. With a stethoscope over jugulars the physician may hear a venous hum and hemic murmur over the carotids.

Thorax and extremities frequently show emaciation, with prominence of the ribs and the bony processes. Auscultation over the heart usually elicits hemic murmurs. These murmurs are often so distinct that the disease may be diagnosed as cardiac disease.

The abdomen presents frequently the distended condition known as "pot-belly."

This is due (1) to the accumulation of gas in the intestine from the poorly digested food, and (2) to the accumulation of a serous effusion in the peritoneal cavity, a concomitant of the anemic blood.

Palpation frequently reveals an enlarged spleen. In some cases this symptom is so marked, that its

association with anemia leads to a diagnosis of malaria.

The genitals are often imperfectly developed; the pubic hair is frequently delayed or scanty.

As to the digestive system: the appetite, as a rule, is ravenous, and when not ravenous is usually capricious. Only in rare cases, usually in the later part of severe cases, does it become impaired. The patient usually desires a sour diet; occasionally a craving for such articles as sand, clay, etc., is present. The bowels are most often constipated, but many have an alternating diarrhea and constipation.

Pain in the epigastrium is often present. This pain is of a dull, dragging nature, or occasionally colicky. The pulse in moderate and severe cases is increased in frequency and very compressible. Hemic murmurs are common over the heart and large superficial vessels.

The blood condition has been referred to under pathology. The respirations are often increased in frequency, in severe cases, on account of poor blood.

Nervous System.—Nearly all cases have an indisposition to work and a tired feeling. From this last symptom the disease is referred to by the papers as "lazy disease." There may be giddiness or ringing in the ears in certain cases, and the patient has a tendency to fall asleep. The sleep is often broken and disturbed by unpleasant dreams. I have known three cases with epileptic convulsions. The result of treatment of these three cases with thymol has not yet been reported to me. In females menstruation is frequently delayed in onset and irregular in occurrence. Amenorrhea finds one of its commonest causes in this condition. Males in severe or long-continued cases may become sterile.

Most common alteration of the urine is lowered specific gravity, alkaline reaction and in severe cases albumin may appear.

Fever is a frequent symptom. In moderate and severe cases, the fever may range from 100° to 103° F.

The first case I ever saw of this disease was sent into the University of Maryland Hospital from the dispensary, with a diagnosis of malaria. The clinical symptoms were typical of malaria. The fever was intermittent, rising every third day. The spleen was enlarged. Only a careful blood examination discarded the diagnosis of malaria. Without a microscopic examination of the stools, the case would have been treated with quinine, and that class of doctors who do not believe all cases of malaria amenable to quinine, would have added one more case of malaria incurable by quinine to this list.

Diagnosis.—Every case of anemia occurring in the South in which the patient lives under the conditions before mentioned, deserves the consideration of uncinariasis as one of the possibilities. A history of ground-itch generally increases this possibility. As anemia is the most prominent symptom the disease is most often confused with diseases which present anemia as their most noticeable symptom. Such diseases as valvular diseases of the heart, parenchymatous nephritis, nephritis of pregnancy, and malaria, are considerations in this diagnosis. From all these conditions the disease may be positively and easily differentiated by the microscope and therapeutic test. Those who have not the advantage of the microscope can use the latter test.

Microscopically the stools are examined for the eggs, the presence of which gives a positive diagnosis.

Technic.—In a drop of water on a clean slide a small particle of suspected stool is mixed to form a thin emulsion. A cover-slip is dropped upon this. The great mistake made here is to get the emulsion too thick, so that the mass cannot be seen through with the microscope. The slide is examined with the two-third objective with most of the light turned off. In heavy cases I have found as many as three or four eggs in every field. When an egg is found it is well to put it in the center of the field and study its structure with the one-eighth objective and see that its description corresponds to the uncinaria egg. Other parasitic intestinal diseases to be differentiated are:

Cochin China diarrhea, due to the stercorulis. Now here the eggs are already hatched out before the stool is passed, and we do not find eggs, but rhabditiform embryo worm. This, therefore would be an easy differentiation.

Seat-Worms.—Eggs shorter and the shell thicker, more opaque and very irregular, crenated margin. This egg develops slowly, and therefore always contains an unsegmented yolk.

Trichocephalus Dispar.—Eggs oval, about same size as uncinaria but dark brown in color, and shell at ends is deficient, this deficiency being filled in with two stopper-like bodies. All these eggs are clearly recognizable from the pictures of them seen in the various works on clinical microscopy.

Therapeutic Test.—Give a dose of thymol according to the method presently to be described, and examine the stool passed afterward for the small worm described in the beginning of this article.

Technic.—Take a two-gallon bottle without a bottom, such as is used in chemical laboratories. Tie a filter of cheesecloth over the open bottom, so that cloth is depressed in the form of a funnel.

Into this funnel place small portions of fecal matter. With a small pipette direct a strong spray of water against the stool until it is all washed through the cheesecloth except the insoluble particles in which the worm will be found. This ingenious method was devised by Dr. Allen J. Smith, and has proved very valuable, not only in examining stools for hookworms, but for other parasites, stones, etc. Many stools in which I could not find a single parasite have yielded as many as one hundred when examined by this accurate method.

Treatment.—Our first object, of course, will be to get rid of the worms. The best anthelmintic of many that have been tried is thymol. But this, to produce the desired results, must be given in as large a dose as compatible with safety, and must reach the intestine in a concentrated condition.

Now, to have the thymol concentrated on reaching the intestine we must withhold the food from the patient twelve hours before giving thymol, and at the same time remove the intestinal contents with a good saline purge. The effectiveness of the thymol will be found directly proportionate to the thoroughness of this preliminary purgation and fasting.

The usual method is to give a very light supper the night preceding the day on which the thymol is to be administered. This supper should consist

of something like a soft boiled egg with a slice of toast and a glass of milk or tea.

At bed-time the patient is to take a full dose of epsom salt. Breakfast the next morning should be denied, or at most a glass of warm milk be allowed. One hour after breakfast the patient is to be given 30 grains of thymol in capsules. This is repeated in two hours. Two hours after the last dose of thymol a full dose of epsom salt is to be given to get rid of the large dose of thymol, which must not be allowed to remain too long in the system.

No whiskey or oil must be allowed while thymol is in the intestine. Both these readily dissolve the thymol and its sudden absorption might produce alarming symptoms. The stools passed after the last purgation are to be carefully examined to confirm the diagnosis, and to see the efficacy of the treatment.

Our second object will be to repair the damage done by the parasites. This is usually accomplished by some preparation of iron. This may be associated with nux vomica and arsenic. Usually the iron by itself is sufficient to restore the blood to its normal condition, and with good food the patient makes a rapid and complete recovery.

Third, and last, it becomes our duty to prevent this plague, as it is preventable. To do this, is to inform the family of their disobedience to the simplest hygienic laws and to show them the results of their observance. First, see that the stools are taken care of by having a common place of defecation, a privy; second, see that this is properly attended to. Then the children who suffer should wear shoes the year round.—*Watson S. Rankin, M. D., Wake*

Forrest, North Carolina. (Published in *The Alkaloidal Clinic*, now *The American Journal of Clinical Medicine*, the journal that is always at the top.)

HOOK-WORM DISEASE

Hook-worm disease is caused by the presence of small worms in the small intestines of man, belonging to a group of round worms, known technically as uncinarinæ. Two different kinds of hook-worms occur in man. One popularly known as the "Old World Hook-worm," the other as the "New World Hook-worm," both of which have been recently divided into many sub-families or groups.

It is probable that what today is known in America as "hook-worm disease" was known but not thoroughly understood by the Egyptians nearly 3,500 years ago (Elber's papyrus). The first hook-worm known to science was found in the intestine of the European badger, by Goeze, a German clergyman. He noticed a membranous expansion at the end of the tail of the worm, and in this saw two finger-like structures, which he interpreted as "hook;" it was from this that the name "hook-worm" was first taken, and not from the teeth, as is generally supposed.

In 1789 Froelich found a similar worm in the fox. In 1843 Dubini of Milan described the first parasite in man. In this parasite the mouth end of the worm is bent at an angle to the body, and Dubini spoke of this bent extremity as a hook, so the name "hook-worm" was perpetuated.

This was the "Old World Hook-worm," which caused the first notable outbreak of the disease in

epidemic form, among the diggers of the St. Gothard tunnel of the Alps. For many years it was supposed that this was the only species of hook-worm found in man, but in 1902 Dr. Chas. W. Stiles, of the United States Public Health and Marine Hospital service, Washington, D. C., discovered in some specimens which had been sent him, another distinct species, which he maned "Uncinaria Americana" (Necatur Americanus).

This is the New World Hook-worm. Therefore this paper will deal with the New World hook-worm disease and the suggestion of a few recommendations which should become laws, in regard to soil pollution and general sanitary laws with reference to our public buildings, schools, churches, etc. in the observance of which we will not only eradicate hook-worm disease, but at the same time, with no additional expense, we will also deal a fatal blow to typhoid fever, tuberculosis, and all contagious diseases. This New World hook-worm is known technically as Necator Americanus, which means "the American Murderer;" it is about one-fourth or one-half an inch long, round, and about as thick as a small hair pin. It has hard cutting plates or jaws guarding the entrance to its mouth, with the aid of which the parasite fastens itself to the mucous coat of the small intestinal wall. The male is from 7 to 9 mm. long, while the female is from 9 to 11 mm. long. I do not consider a complete description of the worm or of each sex necessary for the intent of this paper.

Habitat.—Small intestine of man in America, more frequent in Virginia, North and South Carolina, Georgia, Florida, Alabama and Texas.

are a dead white, with a peculiar expression. The appetite is variable. As the infection continues the abdomen assumes the pot-bellied shape, and patients complain of pain in the belly. You may occasionally have a small quantity of blood in the bowel's action. The color of the stools will be noticeable, in that they gradually assume a darker hue, and in some cases are a dark slate color. In heavy infections you will find edema of the feet, legs, and eye-lids, palpitation of the heart, dizziness, headache, and general weakness, together with a marked condition of non-development. The hair of the arm-pits and pubis is sometimes completely absent. On examination of the heart you will find the murmur caused from anemia; and, in my opinion, if post-mortem was held, you would find an enlarged and hypertrophied condition of the right side of the heart; also an abnormal condition of the lungs, such as an edematous condition, with many spots of discoloration due to the same. This disease has a serious effect upon the mind and prevents children from fully and properly assimilating the education which is offered them. If a patient is left to tell his own story, practically all you will hear is that he "feels weak"—has headache, gets dizzy, has fluttering of the heart, finds it hard to breathe, feels worse in the summer than in winter, and has pains in the stomach.

Duration of the Disease.—This is a case that as yet has not been settled. Dr. Stiles reports some cases that have existed as long as six years, and one of six years and seven months, with another case of a few years longer, but no absolute proof for the longer case.

living in water for thirty days, but exposed to the rays of the sun it is soon killed. The worm in its passage through the skin sets up an irritation, either mechanically or by some poison it generates itself, or by ground-itch. This microscopic worm is taken up by the blood streams and carried to the right side of the heart, thence to the lungs, and penetrating the gossamer membrane which separates the blood from the air, in the little air sacs in the lungs, thence it travels up the bronchial tubes and down the œsophagus to the small intestines. Here they find a normal habitat, and, completing its life cycle, begins its destructive existence by attaching itself to the mucous walls and sucking the life blood from its victim. After the worm has completed its cycle of development outside the body it is possible for it to be swallowed in contaminated food or in drinking water; also to be carried direct to the mouth in biting the finger nails or in sucking the fingers. The adult female worm, having arrived in the small intestines, soon begins laying eggs, which are passed from the bowels in the stool.

Symptoms.—The first symptom is ground-itch dew poison, or toe itch. In light cases a little diarrhea, together with more or less exhaustion after exercise, therefore an indisposition to work, called laziness.

In a medium case of infection you will notice a condition of anemia developing: the patient usually a barefooted child, becomes pale and sluggish. The growth is stunted. As the infection increases the skin has a dirty, pasty look; sometimes it looks green; the hair looks dead and lifeless, the whites of the eyes are very noticeable, as they are a dead white, with a peculiar expression. The appetite is variable. As the infection continues the abdomen assumes the pot-bellied shape, and patients complain of pain in the belly. You may occasionally have a small quantity of blood in the bowel's action. The color of the stools will be noticeable, in that they gradually assume a darker hue, and in some cases are a dark slate color. In heavy infections you will find edema of the feet, legs, and eye-lids, palpitation of the heart, dizziness, headache, and general weakness, together with a marked condition of non-development. The hair of the arm-pits and pubis is sometimes completely absent. On examination of the heart you will find the murmur caused from anemia; and, in my opinion, if post-mortem was held, you would find an enlarged and hypertrophied condition of the right side of the heart; also an abnormal condition of the lungs, such as an edematous condition, with many spots of discoloration due to the same. This disease has a serious effect upon the mind and prevents children from fully and properly assimilating the education which is offered them. If a patient is left to tell his own story, practically all you will hear is that he "feels weak"—has headache, gets dizzy, has fluttering of the heart, finds it hard to breathe, feels worse in the summer than in winter, and has pains in the stomach.

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Thymol in Hookworm Disease.

In the issue of the Public Health Reports for December 8, 1911, Chas. Wardell Stiles and George F. Leonard discuss briefly the administration of thymol in hookworm disease. Recently an exceptionally severe case of the disease came under their observation. In order to impair the patient's strength as little as possible the preliminary dose of magnesium sulphate, usually given the evening before the thymol is administered, was omitted, and very small doses of thymol were employed. The results were satisfactory. In several other cases thymol was administered without first giving salts, and hookworms were obtained. Consequently, on theoretical grounds and from practical experience, in cases of severe hookworm disease, the authors feel justified in recommending that the preliminary dose of salts be omitted and small doses of thymol used for one or more courses of treatment. It is also pointed out that the number of worms obtained in any given case is influenced not only by the size of the dose of thymol, but by the number and position of the worms present and the amount of food in the intestinal tract. The principle upon which the small dose is used is that if numerous worms are present the thymol will reach some of them at least and a case of severe infection can thus gradually be reduced to one of lighter infection.—Medical Record.

Treatment of Uncinariasis.

Beta-naphthol in 3 doses of 30 grains each at intervals of two hours, followed, again in two hours, by 6 drams of magnesium sulphate, found to expel 97.52 per cent. of total number of hookworms present. Thymol, in same dose, expelled 97.87 per cent., but caused serious constitutional disturbance. A 60-grain beta-naphthol treatment expelled 86 per cent. It was given as follows: Beta-naphthol, 4 drams (16); mucilage of tragacanth, 1 ounce (32); peppermint water to make 6 ounces (192).—*Nicol.*

Diagnosis.—Microscopical examination of the feces will reveal the eggs in infected cases. In the absence of the microscope, the blotting paper test will be reasonably satisfactory; that is, if a small amount of feces have been allowed to stand on a clean, white piece of blotting paper for a few hours, you will find a ring of dark brown character formed on account of theamount of blood contained therein. Of course you will have to eliminate piles, etc., in your diagnosis by this test. Do not be discouraged if you do not find the eggs, as soon as you notice the toe-itch symptoms, in case you see the case at this early stage, as it requires from four to six weeks for the parasites to reach sufficient age to lay eggs. Loese showed that some cases were seventy-one days after infection before eggs were found in the feces. I do not give a microscopic description of the eggs as that can be found in your text-books.

Treatment: Medicinal and Most Important Preventative.—Thymol internally in capsules in the following manner: the day before giving thymol put the patient on milk or light diet and give a large dose of salts. Have patient to retire early and get a good night's rest. The day you begin treatment, according to age, give from 10 to 30 grains of thymol at 7 a. m., repeat same dose at 9 a. m., and at 11 o'clock give a large dose of salts. If bowels have not moved by two or three o'clock, give an enema or repeat the salts. Have patient to use suitable receptacle to collect the feces so as to confirm your diagnosis by seeing the worm. Extreme care should be taken in giving the thymol treatment, as thymol is a powerful drug, and in some patients produces peculiar symptoms, has depression, dizziness, profuse sweating and sometimes unconsciousness. Should a stimulant become necessary use strychnine or aromatic spirits of ammonia. Do not use alcoholics nor oil, on account of thymol absorption. Also do not pulverize your thymol too finely, as it will not be taken up by the system so readily, and there is some danger of its being passed out with the action of the salts before it has performed the work you intended. Never should thymol treatment be given or taken except from or under the directions of a physician, and then only after having at least one day's preparation for the treatment. It is impossible for this disease to be eradicated unless soil pollution is prevented. As it is spread by soil pollution it is in the hands of the people to eliminate it.

Preventative Treatment.—Sewer system is the only ideal; in absence of this, then, we look for the next best compromise. The ordinary surface closet, with open back, that is found in the country as the most used closet, is the poorest compromise that can be made. For not only is the danger present of contaminating the water supply in near-by wells, but soil pollution naturally occurs around the outhouses, and this is increased by the fact that chickens, dogs and hogs have access to the night soil and scatter the infectious material; also flies and other insects either breed in or feed upon the excreta and carry fecal matter to the food in the house. This style should be absolutely abolished. Closets should be constructed with solid floors having a drop door at the back that will absolutely prevent flies and chickens, dogs, hogs, etc., from getting to the refuse matter. Good tubs or boxes should be placed in closets where it is impossible to get a water supply,

and these boxes should be cleaned at least once each week. This refuse matter should be burned if possible, but if not burned, then it should be buried in a suitable spot, being covered with lime, carbolic acid solution, etc., then covered so there will be no danger of it being scratched up by scavengers. The boxes when placed in the closet should have the carbolic acid solution or some good disinfectant placed in them. In the absence of this put in clean, dry earth. All ventilation to the closet should be closely protected with gauze wire.

I look forward to the day, and hope that I shall soon see it, when this disease will be eradicated. Our state should have laws that will require all schools, from the great universities to the most humble country free school, to erect and maintain sanitary closets according to directions furnished by the State Board of Health; also to require all pupils attending these schools to use these closets when upon the school ground. The State should provide sufficient wash basins, soap and towels, and maintain same, and require all pupils that carry lunches to school to wash their hands and faces before they be allowed to eat their lunches. The grounds should be kept clean and in a sanitary condition. The floors of all schools and public buildings should be swept once a day, first sprinkling the floors with some good disinfectant or with sawdust wet with formaldehyde or carbolic acid. Each child attending the different schools should be provided with separate drinking cups. Good water coolers or better filters should be furnished in all public buildings.

Then, and not until then, can we ever expect to obtain the results of this fight of preventative medicine.—*C. P. Martin, M. D., Woodstock, Ala.*

HOOK-WORM DISEASE

The recent much talked of "hook-worm disease" (ankylostomiasis) or uncinariasis has been known to exist since Dubini discovered the tunnel or hook-worm in Milan in 1838. It has been found in so many countries that it is highly probable that it is endemic all over the globe between the parallels 51 degrees north and 30 degrees south; at any rate, in these localities where the character of the soil and habit of its people favor its propagation.

Not until Stiles reported many cases and fully described the parasite and symptoms produced by it did America find much interest. The south is especially interested, as the greater number of Stiles' cases were found among its people. The mill population and the poorer classes form the greater number of victims, but are not the only ones by any means, as the report below will show.

History of Case.—N. C., a young married woman living in the best residence section of Memphis and under the best surroundings, came to me in November, 1909, with the determination of an infection of cestodes or tapeworm. I tabooed the idea, but as on previous occasions found the patient steadfast in her views. So I suggested she might have "hook-worm disease," at same time entertaining little hope of finding same. She readily consented to treatment, with surprising results.

Examination.—Tall, slender and anemic, conjunctiva very significant of her anemic condition;

blood gave a distinct anemia with a marked eosinophelia. No malarial organisms found. Patient complained of being "tired and bilious" the greater part of the time; constipation almost constant, and the symptoms of indigestion present.

Treatment.—In the afternoon of the first day one-half ounce of epsom salts was given; evening meal consisted of weak tea and crackers; next morning no breakfast allowed. Thirty grains of thymol given and repeated in three hours; no saline was necessary afterward.

Results.—A part of three stools was saved for examination; this was macerated in distilled water and strained through fine net gauze. The parasites found in numbers thought to be hook-worms, which was confirmed by the microscope.

At the end of thirty days the patient had gained in weight several pounds, and all symptoms of indigestion had disappeared. She had more energy and said she "felt better than at any time for several years past." Patient has now begun to complain of some of the same symptoms, no doubt due to the same cause. The treatment should have been repeated at the expiration of one month as in every case.

This case shows conclusively that none of us are free from this grave malady; for here was a patient living under the most favorable circumstances and yet infected.

It is entirely probable that if more of the better class should be examined the parasite would be found and many cases of "biliousness," whatever this may mean, and chronic malaria would really be cases of ankylostomiasis, or "hook-worm disease." —*Dr. W. T. Pride, Memphis.*

PELLAGRA: THE LATEST "MEDICAL PERIL"

This disease, so virulent that it has been called "Italian leprosy," was until the last two years unknown in this country. Hundreds of cases have been uncovered recently, and in many states it is a serious medical and economic problem. As we shall see later, looking at the disease in the light of the commonly accepted theory as its etiology, the spread of this disease may have a far-reaching effect upon our most important agricultural crop, that of Indian corn. Anything which inimically affects the cultivation of corn and its profitableness strikes a serious blow at the prosperity of the richest section of our country.

Until two years ago there were not known to be any cases of pellagra in the United States. The first indigenous cases (except two or three sporadic ones) to be reported were described by Dr. G. H. Searcy as occurring at an insane asylum in Alabama. This was in 1907, Dr. Searcy's cases were of the acute type. But the succeeding summer (in 1908) two South Carolina physicians, who had studied the disease in Italy, identified cases in their own state, and soon many others were brought to light in other southern states—South Carolina, North Carolina, Georgia, Alabama, and Tennessee. Early in the present year (1909) pellagra was discovered in the Cook County Insane Asylum at Dunning; then it was found to be present in the State Asylum at Bartonville, Illinois, near Peoria. According to Dr. C. H. Lavinder, of the Public Health and Marine Hospital Service, there are now records of about 1,000 cases of pellagra scattered through thirteen states. More than half of these are in asylums or similar institutions.

While some of the cases reported as pellagra are undoubtedly erroneously so diagnosed, it is also highly probable that there are hundreds, very likely thousands of cases which have not yet come to light. This is rendered the more probable because if we accept the Italian statistics, only about 10 per cent of the victims reach the insane asylums. Accepting that hypothesis, there would be in excess of 5,000 cases with many institutions in different states still to be heard from.

In the light of these facts *The American Journal of Clinical Medicine* wishes to urge upon its readers the importance of familiarizing themselves with the symptoms of the disease and promptly reporting cases.

The word "pellagra" comes from two Italian words meaning "rough skin." It was first observed in Europe, in Spain, about 1735. Since that time it has spread all over southern Europe, and into Asia Minor and upper Egypt. It is most prevalent in Italy and Roumania; in the former country there are said to be 100,000 "pellagrins" (as people suffering from this disease are called) and in Roumania 50,000. In Italy it is recognized as a national menace and the government is taking vigorous measures to arrest its spread.

Nearly one hundred years ago attention was called to the relation subsisiting between maize and

pellagra, and now the dominant theory is (and has been since 1844) that the eating of spoiled maize (Indian corn) is the cause of this disease. This theory received the support of the great Italian criminologist, Lombroso (who, by the way, died last November, 1909), who devoted twenty-five years to its study. His theory is that certain fungi growing on this spoiled corn produce a certain toxin, or toxins, which in turn may cause the disease. He believes that two of these are found in diseased corn, one resembling in its action strychnine, the other cicutine.

At the Mississippi Valley Medical Association at St. Louis, in October, 0000, Dr. Watson, of Columbia, S. C., exhibited a case of this disease, which gave us a much clearer conception of its character even than did his splendid paper on the subject. He also injected a guinea-pig with an alcoholic extract made from musty corn. The cavy died in less than five minutes, thus illustrating the extreme potency of this pellagrinous poison. The symptoms of pellagra have already been described in *The American Journal of Clinical Medicine*, so that we shall not try to enumerate them all again in detail. There are some points, however, that we desire to emphasize.

1. Pellagra is not a "skin disease." The eruption is only one symptom, and that often a late one. This eruption usually is absent during the winter months, appearing early in the summer and lasting, with various exacerbations and occasional improvement, until autumn, when it again fades, leaving behind areas of darkened skin, described by Dr. Watson as "liver or chocolate colored."

At its first appearance it can not be told from a sunburn. There is the same inflammatory redness, followed by a similar exfoliation. Later in severe cases there may be bullea, crust, cracks, etc. There is no itching. Usually the eruption is confined to the exposed portions of the body, the hands, the feet (if the individual goes barefoot) and the face. Covered portions are rarely affected, but usually pressure points, as elbows and knees, suffer slightly.

2. The whole alimentary tract is affected in greater or less degree, the inflammatory reaction which is manifest probably being analogous of the skin eruption. This is most apparent in the mouth, the tongue becoming a bright red ("cardinal tongue," so-called) as does the whole buccal mucosa; there is also salivation and a disagreeable odor. There is soreness in the stomach, occasional vomiting and persistent diarrhea in most cases. One of the speakers at the Mississippi Valley meeting stated that he had found the rectal mucosa reddened like that of the mouth.

3. There is loss of weight as well as of strength. The more prominent the diarrhea, the faster the patient does down-hill. There is great muscular weakness, almost amounting to paralysis, in the lower extremities, giving the patient a shambling gait, simulating loss of co-ordination, which is accentuated by the fact that the patient often suffers from vertigo. Usually he is stooped, the shoulders being dropped forward.

4. The nervous symptoms are prominent, indeed the poisons of the disease primarily seem to attack the nerve-centers. In other words, the disease is a profound toxemia, striking at the very cen-

ters of life. It has been suggested that the skin and digestive symptoms indicate the route of toxin elimination, although they rather suggest trophic symptoms. Headache is very common and the patient usually suffers severely from backache; while there is tenderness along the spine.

5. In every case there is greater or less mental depression. This may be mild, or pass to actual insanity. In Italy 10 per cent eventually go into the asylums, and the same is true in this country, probably. Dr. Zeller, superintendent of the Baronville Asylum, made the statement that there were 200 cases in his institution. We have reproduced one picture to show the typical pellagra facies, the expression of despair which it shows being characteristic of many of these cases.

6. While there is an acute form of the disease, which may be rapidly fatal, very many of them are extremely chronic, some cases persisting for twenty and twenty-five years. The case shown at St. Louis was of a boy twelve years old, who had suffered from the disease for nine years. An older sister had died at fourteen, after ten years of suffering. These children were brought up in a country gristmill, where they played in the newly ground corn.

What of the treatment? The diarrhea and digestive symptoms are usually treated with opium, bismuth and astringents, but this is not the essential point of therapeutic attack. In our opinion, however, the necessity of having a clean alimentary tract is as important here as in other diseases, and it should be kept as nearly sterile as possible by the use of the sulphocarbolates to prevent the additional poisoning which may be contributed by fecal material.

According to Lombroso the most important single remedial agent is arsenic, and this has been given in many forms—the whole gamut, all the way from Fowler's solution to atoxyl, having been run.

We have had no experience with this disease, but it seems to the writer that we have to deal here with an infection and a toxemia that is or at least may be self-perpetuating within the body of the individual, since it persists even after the cause has been removed. Aside from the control of diarrhea, the disinfection of the bowel, the favoring of digestion and nutrition, the support of the vitality, all by proper remedial agencies, it seems that we should make an effort to combat this poison.

Two remedies especially occur to us as likely to prove of value here, and these are calcium sulphide and nuclein. The former is a direct antagonist of low forms of life; the latter raises the resisting power of the blood and favors the improvement of nutrition. I should like to see these tried, the latter hypodermically. Arsenic, so warmly praised by Lombroso, cannot be given in a better form than arsenate of strychnine or the arsenate of quinine; these should prove of great value. Iron is said to be contraindicated.

With these suggestions I leave the matter in the hands of our readers.

—*The American Journal of Clinical Medicine.*

SOME FACTS ABOUT PELLAGRA

The recent discovery that pellagra is widely diffused through our southern states warrants some notice of this remarkable disease.

In Johns Hopkins *Bulletin* for July, Thayer records his observations on some cases discovered in Maryland. The appearance of this malady has been reported in Georgia, Alabama, Texas; and especially in South Carolina it has received closer study. Recently a number of cases have been reported in the Cook County Insane Asylum at Dunning. The symptoms ascribed to pellagra are: Gastro-intestinal—nausea, dyspepsia, vomiting, and especially diarrhea, marked in the mornings and often obstinate; a severe form of stomatitis with fiery-red mucosa, eating and swallowing being extremely painful; aphthous ulcers extending over large areas, patches of white macerated epithelium exfoliating, leaving a raw, velvety, fiery-red surface, and distressing salivation.

The cutaneous symptoms are significant. There is erythema on the dorsum of the hands and, in those who go barefoot, on the feet, the palms and soles being rarely affected. These patches resemble sunburn with, however, the margins more sharply defined; they are always symmetrical; they show slight if any swelling, the brilliant red blush becoming deeper or cyanotic; extending down to the next phalangeal joints and back to the wrist, where it ends abruptly. The affected surfaces soon become dry, scaly and exfoliate in scales, leaving the skin dry, cracked and fissured. Bullæ may form on the hands, filled with pus, blood or serum. The epithelium exfoliates in large masses, leaving the skin areas raw and red, thin and atrophied, often glistening, shiny, with slight superficial wrinkles, cracks, deep-red or brownish, and fissures sometimes deep and hemorrhagic. In marked cases the skin over the last two phalanges becomes dry, deep brown, with bullæ and exfoliation. Similar changes take place on the dorsa of the feet in barefoots, and in bad cases they also appear over the cheekbones and the bridge of the nose; occasionally about the neck like a collar.

While this erythema is influenced by sunlight, it is readily distinguished from the ordinary effects of sunburn. The appearance is not specially prevalent in summer, and children who run naked show the same location of the lesions.

As nervous manifestations, we have vertigo, and grave symptoms from the cord. In severe recurrent forms we note a general increase in the deep reflexes, especially in the lower limbs; well marked spastic symptoms, sometimes disturbed sensation and sphincter paralysis; reflexes of lower limbs lost, of upper increased; sclerosis, especially in the lateral columns of the cord, lesions of the posterior columns not unusually, and according to Sand with degeneration of the posterior roots.

Neussar summarizes the mental symptoms as follows: At first as a rule confusion, weakness of judgment and will, anxiety, disorientation as to time and place, alteration of disposition from slight depression to hypochondria and suicidal tendency; the patient is often silent, dull and serious, looks as if he had forgotten how to smile, with self-depreciation, delusions of persecution, self-accusation; refusal of nourishment; often mania, the depressed patient becoming suddenly emotional and restless, this followed by apathy or catalepsy. Hallucinations of sight and hearing are common. Mutism is

frequent. The mental deterioration progresses, and terminal dementia supervenes.

Clinically two forms are recognized, namely, the acute, typhoidal, and the milder, chronic or recurrent. The first runs to a fatal end in a few weeks, with active delirium, fever and uncontrollable diarrhea. The second may be prolonged for twenty-five years. With each relapse anemia, debility and emaciation increase, the patient becomes cachetic, demented and bedridden. The onset is usually in the spring. The patient is apt to improve during summer, relapsing in early fall. Apparent recovery may ensue, with recurrence in spring.

In Italy pellagra is exclusively a disease of the poor, the farm laborer, the consumer of cheap, moldy corn. Great improvement has followed the exclusion of spoiled corn from the diet; the use of drying apparatus for corn, public storehouses, rural bakeries; exchange of good corn for bad; also local hospitals, sanatoria, dispensaries and economic kitchens. Education in modern agriculture has proven beneficial. The malady is ascribed generally to the consumption of Indian corn gathered too soon and contaminated with some pathogenic fungus (diplodia, etc.).

The first case described by Thayer presented a typical picture of pellagra, except that the relapse occurred in October without one following next spring. The altered complexion, drowsiness, chilliness, and facies resembling that of advanced nephritis so much suggested hypothyroidism that the use of thyroid extract was begun. Improvement was immediate and remarkable, the mental, cutaneous and gastro-intestinal symptoms cleared up entirely, and the patient remains well as long as she takes the thyroid extract. The hypothyroidism may have determined the occurrence of pellagra, since she did not partake of maize more than did others unaffected. In other pellagrinous cases Babcock did not find thyroid extract curative. The second case was that of a teamster who could give no causal history other than mixing corn chop for his horse with his hand. This was followed by the development of characteristic pellagrous lesions of the hands, in the mouth, etc.

These cases indicate that pellagra may be far more widely prevalent than is suspected, that its dependence on moldy corn may not be direct or essential, and that the malady is probably spreading widely. It is not limited to the poor in America.

Look out for pellagra. Investigate any case of obstinate diarrhea with salivation and stomatitis, fever, and affections of the backs of the hands or feet, with respect to any connection with pellagra.

Apply the well-settled principles of rational direct therapeutics—clear the bowels, disinfect them with sulphocarbolates, reinforce leucocytosis with nuclein, saturate the body with calcium and arsenic sulphides, keep the eliminants free, sustain the vital functions at normal activity, and reinforce the points of lowest vital force, treating symptoms as they arise.

Let us see whether the careful observers trained in the active-principle ranks can uncover cases of pellagra and do more in treating it than the users of incongruous conglomerations and experimental novelties.—*The American Journal of Clinical Medicine*, Chicago, U. S. A.

CLINICAL TYPES OF PELLAGRA

Pellagra, to my notion, is named after the least of its grave symptoms. It derives its name from a symptom which may be entirely absent, as in some cases, or so mild, as in others, that it may be overlooked altogether. No doubt for this reason many errors in diagnosis have been made and many cases gone under the affix of another malady. The epidermal manifestation is in the majority of cases the most prominent objective sign of the disease and usually the earliest to make the diagnosis from, still it must be borne in mind that a most virulent type may exist without this symptom in evidence. The epidermal picture exhibited may vary from a number of dirty red splotches which appear on definite regions of the body, with little or no exfoliation, to a deep seated erythema accompanied by slight or abundant exfoliation. If manifested by red splotches they are usually to be found on the dorsal aspect of the finger joints, the elbows and over the molar protuberances. In the colored race a sooty or dark pigmentation seems to be the rule in these regions. In one case, a colored boy of eight years, I observed an ink-colored pigmentation in the skin overlaying the orbital fossæ, the only case in which I have found the pigmentation located in this region. If the erythema be slight and only superficial, we find the epidermal manifestation appearing usually on the dorsal aspect of the hands, first noted by a dark red discoloration of the tissues, which may last from a few weeks to several months; this stage is then supplanted by a hardening and thickening process of the horny layers, accompanied by fissures occurring about the joints. The skin appears very scaly and rough and there is usually a slight exfoliation occurring all the time usually with the exception of the redness, the same condition occurs along the extensor surfaces of the forearm to a little above the elbow. The roughened condition is somewhat exaggerated in the immediate tissues overlaying the dorsal surface of the elbow, the skin overlaying the sterno-cliedo-mastoid muscle and its immediate vicinity, and the skin of the face may or may not be affected. Where the erythema is deep seated we usually find the epidermal symptoms more general and most pronounced. Attention to this condition is generally called by a patient after an exposure to the sun, and the physician is invited to treat what is supposed by the patient and his relatives to be a severe sun burn. In such cases the tissues on the backs of the hands, to the wrist, on the extensor surfaces of the forearm to the elbow, the face, sides of neck, tops of feet, ankles and knees, present an exceedingly reddened surface and what appears to be a highly inflamed condition. In women the vaginal mucous membrane has been frequently found to be involved, and on examination it presents a very red, inflamed surface which is irritable and painful. One or more of the various regions just described may be exempt but it is seldom that the hands ever escape. The redness is generally sharply defined and is in the boundary line for the exfoliating surface. Passing from active stage of redness the epidermis rises into vesicles, or large irregular shaped bullæ, succeeded by crusts which desquamate to leave the epidermis very often a reddish, shining, fissured surface, or thickened, hard, dry, scaly and pigmented yellowish or brownish. The symptoms are usually at their height during the

spring or early summer, subside entirely or become not so active during the winter, and return the following year in an aggravated form.

The Digestive Disturbances.—The whole digestive apparatus seems to be involved and the symptoms vary from mild to aggravated forms. The breath is very offensive, the tongue at first becomes pointed and fiery red around the edges, with a thick brownish coat reaching from its root and which becomes more narrow as it approaches the tip, where it forms an apex. I have never seen the coat extend entirely to the edge of the tongue. Later the tongue may become fissured and often ulcerated around the edges. After the inflammation has subsided it becomes denuded of epithelium, remains fissured, and presents a slimy, bald appearance. The buccal membrane frequently reddens and sometimes becomes ulcerated. The gums often suffer, they become highly inflamed, often ulcerated around the teeth, and after the inflammation subsides they are left sore and spongy. The posterior fauces in the severe types sometimes become highly inflamed and very sensitive—on this account the patient will quite frequently refuse food or drink. There is a loss of appetite, and malnutrition and emaciation are marked. Thirst in some cases is exaggerated. Salivation is usually marked in the majority of cases, and in some the saliva will dribble from the mouth. There may be diarrhea or constipation; however, diarrhea of the most obstinate form is the rule. The number of movements varies up to twelve or fourteen per day, and are usually watery and very offensive. In many of the cases the color of the stool is greenish in character.

The Neuro-Psychic Side.—The symptoms of this phase of the disease are the first to appear and are presented in many forms. They are usually mild at the onset and most often unrecognized until the attention is called to the epidermal or digestive disturbances. However, they gradually increase in intensity with time. The onset is gradual. The patient may become irritable, somewhat restless, nervous and generally dissatisfied, or he may present a picture of beginning melancholia; usually the patient expresses himself as feeling "bad," worthless and without vitality or energy, and when sitting alone presents the picture of one pre-occupied. Frequently he will complain of vertigo, disturbed vision or headache. In the early states of the intense types there is an occasional febrile movement, the temperature ranging from 99° to 101° F., sometimes higher. In many cases the patient walks with difficulty, complaining of extreme weakness, the knee jerks are at first increased, then diminished, and finally abolished, or may react differently on the two sides. Some cases present a sense of uneasiness about the top of the head as though it was weighted down. Frequently there is pain in the dorsal region which may be made worse by intense pressure; pain is also frequently elicited when pressure is brought to bear over the pit of the stomach. The facial expression is usually one of anxiety and fear. In many instances the patient is apprehensive, scary, uneasy and suspicious.

On account of this latter state it is quite often a difficult matter to elicit symptoms. Where the psychosis is far advanced depressing delusions are frequent. In some cases there is an occasional

convulsive seizure or an acute maniacal outbreak. When maniacal, it is usually of a noisy, destructive type. Finally the patient succumbs to a state of mental deterioration or dementia.

My experience with pellagra has led me to place each case under one of three headings, viz.:

First class: Those which have all the classical symptoms, epidermal, digestive and neuro-psychic. In this class all the symptoms are intensified with epidermal most evident.

Second class: Here the patient presents only a mild epidermal manifestation but with digestive and neuro-psychic symptoms still prominent.

Third class: In this class there are no epidermal manifestations, but usually all the other symptoms in some form are present.—*C. M. Rudulph, Birmingham, Ala.*

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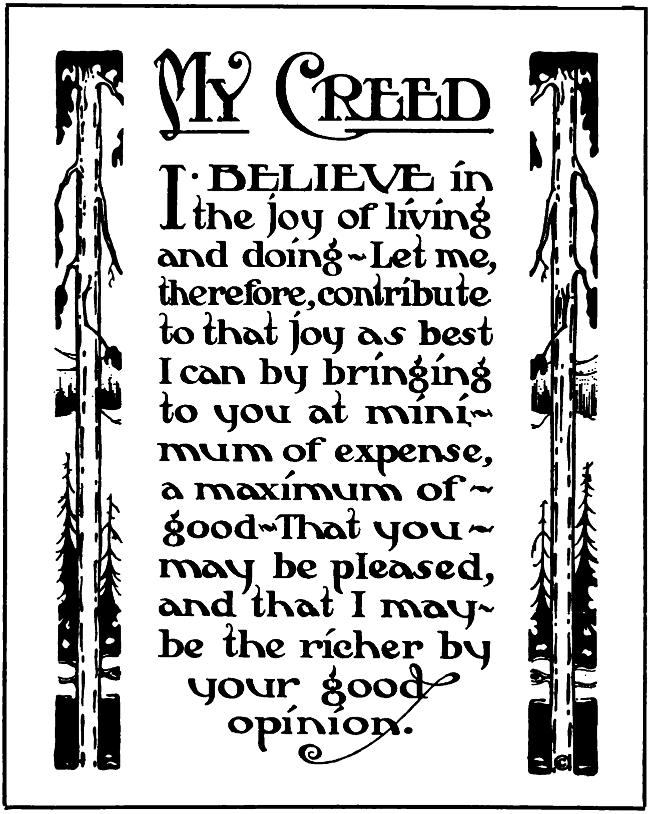


MY CREED

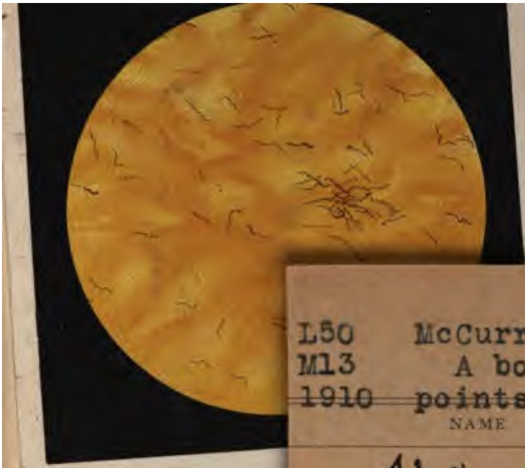
I BELIEVE in the joy of living and doing—Let me, therefore, contribute to that joy as best I can by bringing to you at minimum of expense, a maximum of good—That you may be pleased, and that I may be the richer by your good opinion.

THE DOCTOR'S CREE

Wassermann's Reaction.

August Wassermann, (vahs-er-mahn) Berlin bacteriologist, born 1866. A diagnostic test for syphilis, based upon the theory of complement fixation. Measured quantities of extract from the liver and spleen of a syphilitic fetus (representing the antigen) and of the blood-serum of the person to be tested are mixed in a test tube, and some fresh normal guinea-pig serum (containing the complement) is added; after incubation at body temperature for about an hour the contents of this tube are added to a mixture of the red blood-cells of a sheep or other animal, suspended in physiological saline solution, and of the serum of a rabbit which has been immunized to these particular red cells; if the serum mixed with the extract of syphilitic organs in the first test-tube is from a syphilitic individual, no hemolysis of the red blood-cells in the second tube will occur after incubation for one hour.

(*Stedman's Medical Dictionary.*)



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